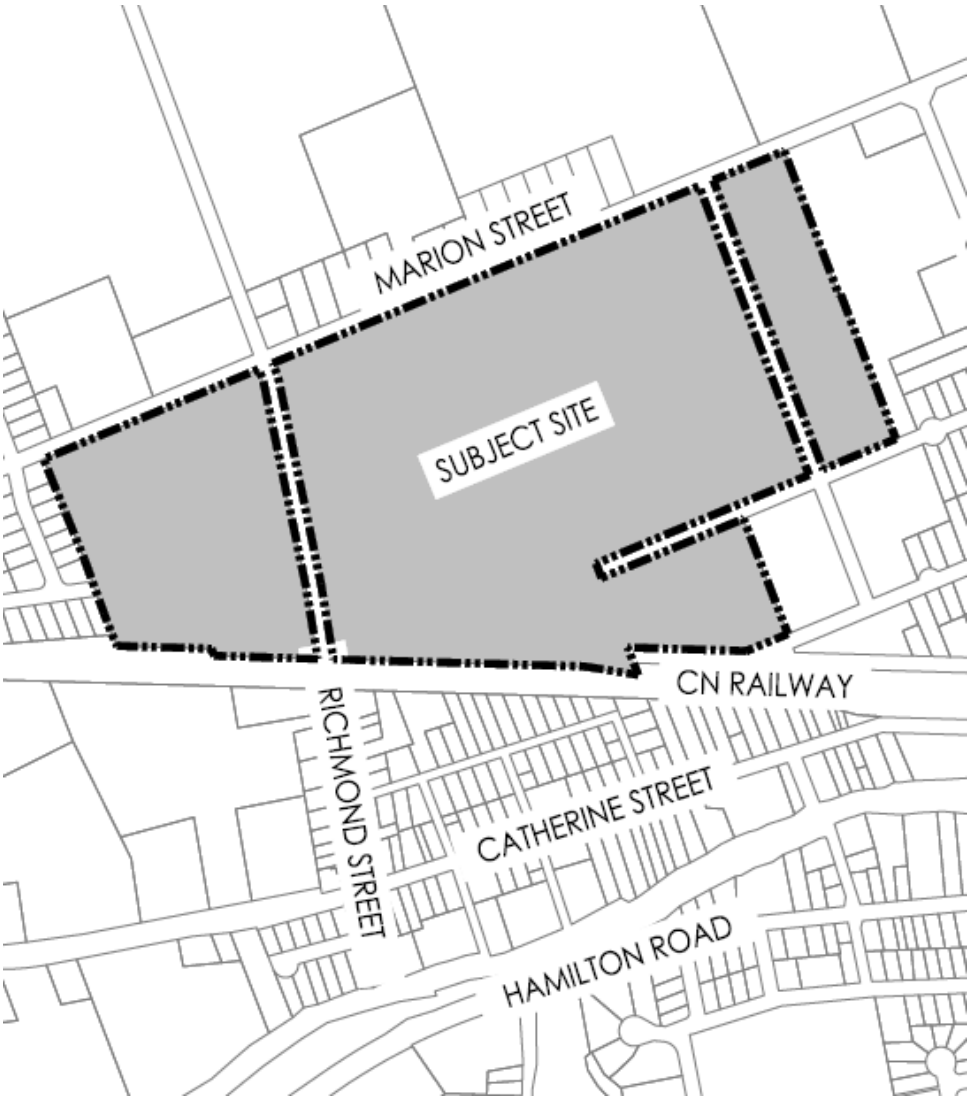


PLANNING JUSTIFICATION REPORT

1598 RICHMOND ST. DORCHESTER-DONNYBROOK ESTATE

AUBURN DEVELOPMENTS INC July 13, 2022

Table of Contents

Introduction

Auburn Developments Inc, as an agent for 1319776 ONTARIO INC., has submitted an application for rezoning to the Municipality of Thames Centre, as well as an application to the County of Middlesex for approval of a Plan of Subdivision.

The purpose of the following Planning Justification Report is to evaluate the proposed Zoning By-Law Amendment and Plan of Subdivision within the context of existing land use policies and regulations and provide a planning rationale for the proposed change in land use.

Subject Lands

The subject lands are located directly in the south of Marion St and Richmond St. intersection.

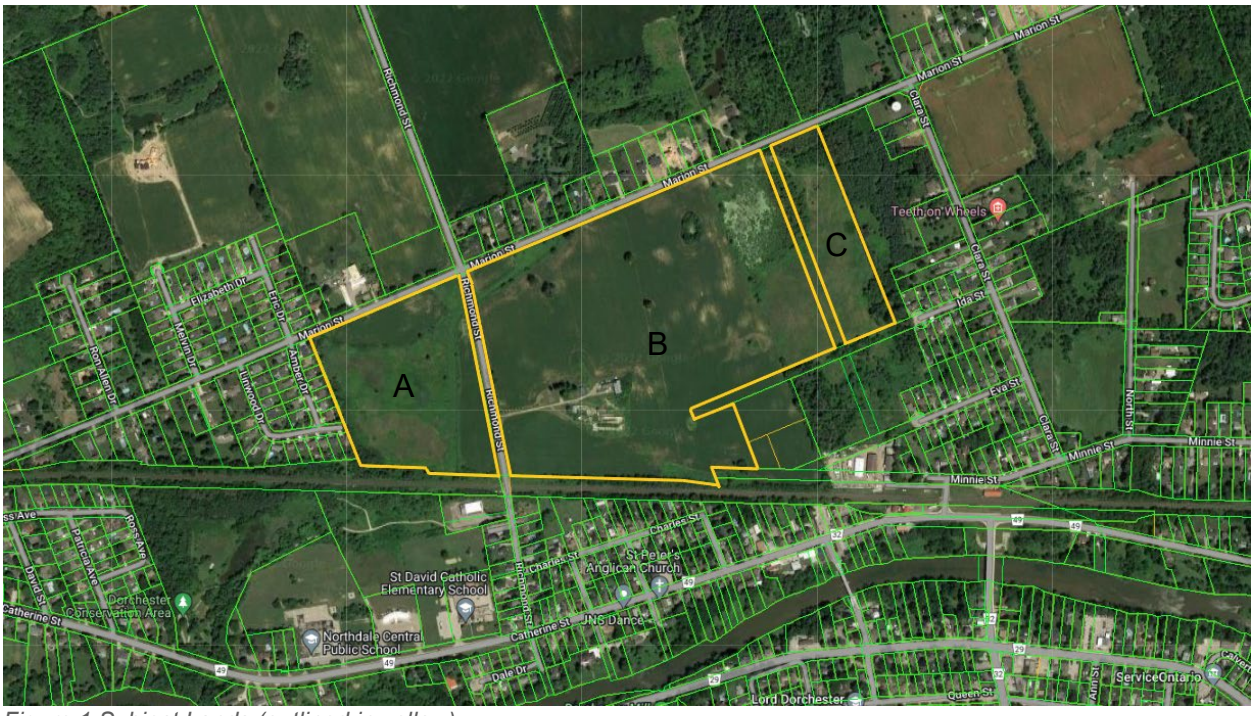


Figure 1 Subject Lands (outlined in yellow)

The subject lands have an area of approximately 439.92 ha (108.53 ac), a total frontage of approximately 1,005 m (3,298 ft) (three sections being 305m, 604m and 96m each) on

Marion St. The overall depth of the subject lands is approximately 387m (1,270ft), 395m (1,298ft), and 404m (1,325ft) north to south.

Figure 2 Subject Lands Looking from Richmond St and Marion St Intersection (Southwest)

Figure 3 Subject Lands Looking from Richmond St and Marion St Intersection (Southeast)

On Parcel A, area of the land facing Marion St, and Richmond St are cultivated fields, and the remaining part remain vacant. For Parcel B, the vast majority of the subject lands are cultivated fields, with a small portion in the middle of 1598 Richmond St with vacant farm structure and road access. Parcel C remains vacant.

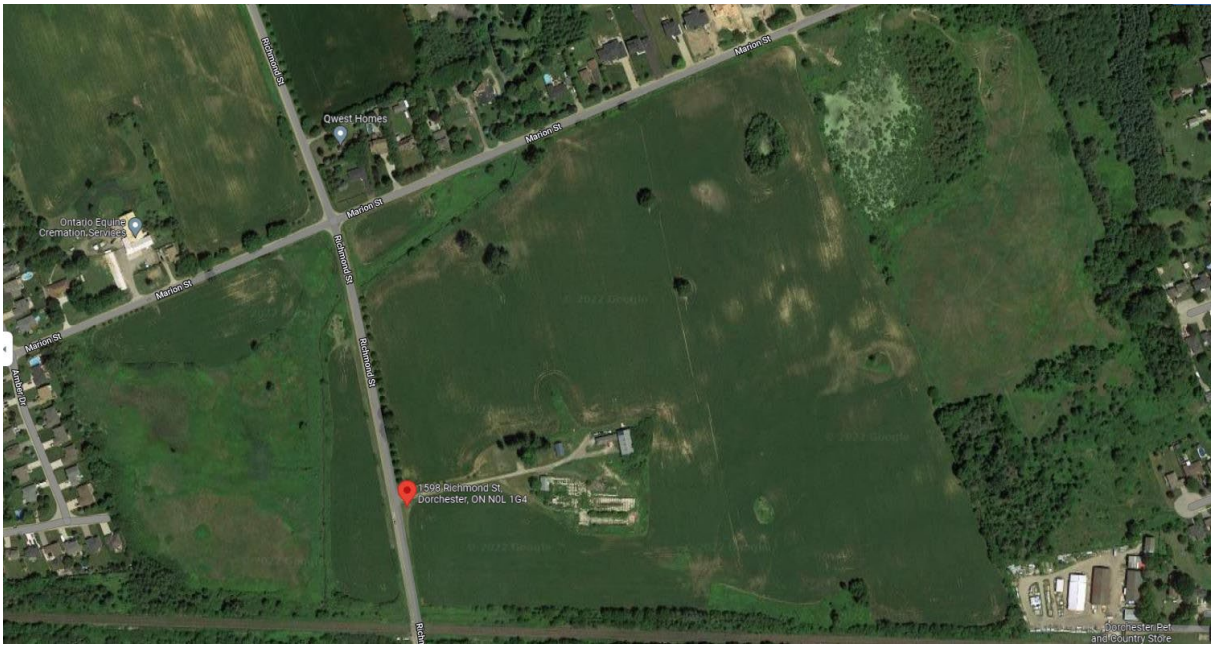


Figure 4 Aerial View of Subject Lands

Land uses abutting the subject lands fronting on to Marion St. consist of single detached dwellings, vacant land, and a cremation service facility. Lands to the east of the property consist of single detached dwellings, and land to the west are vacant. Lands to the south is a railway. There are residential houses and commercial houses abutting said railway to the south as well as some vacant lands.

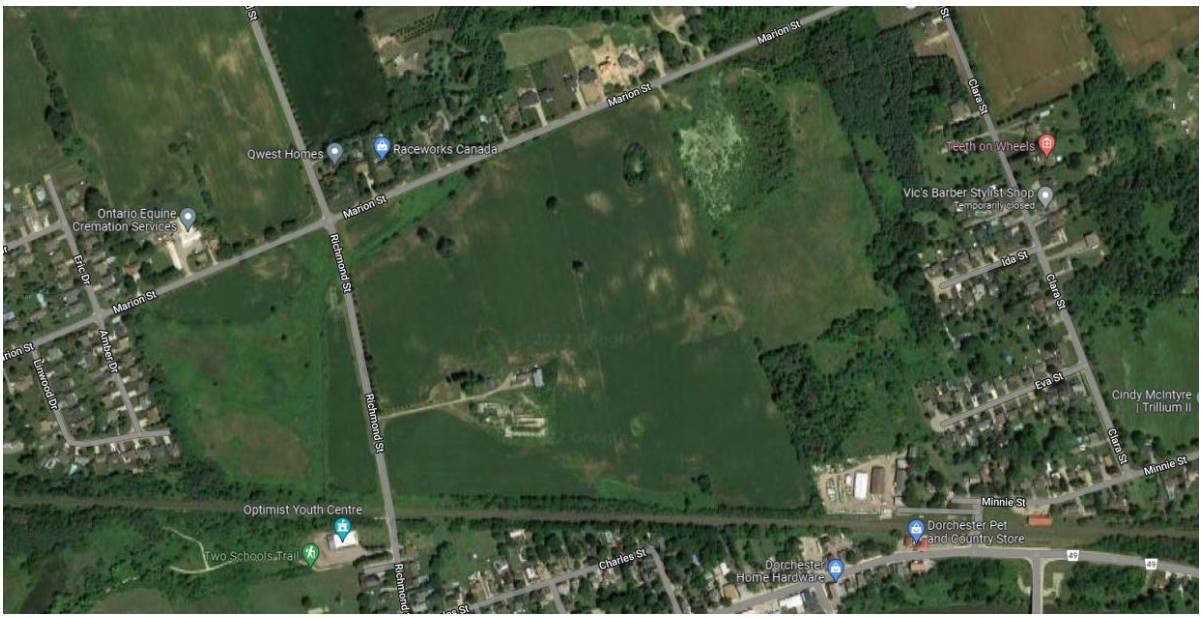


Figure 5 Aerial View with Abutting Properties

Proposed Development

Auburn Development proposed to develop the subject lands primarily for residential uses which is in conformity with the Municipality of Thames Centre Official Plan Land Use designation “Residential”. There is also a small portion of land designated as “Neighborhood Commercial” which has also been identified and incorporated into the application in more of a “mixed use” form through combined zoning for the site.

Figure 6: Conceptual Development Plan

Proposed development is aligned with the Official Plan Designation. Generally, built form would be limited to single detached dwellings, semi-detached dwellings, and townhouses.

The development proposes road access for the property located along Richmond St, Marion St., and extensions of Linwood Drive, Ida, and Eva Street. Direct access from the Blocks to adjacent streets is also anticipated.

Sanitary servicing for the subject lands may be accomplished through installation of a pumping station on the south portion of the site (Block 39) as per approved Environmental Assessment. As for the SWM Facility, the proponent is proposing 2 SWM facilities for this site.

The SWM blocks and facilities on site are sized and conceptually designed to provide the required quantity and quality controls under the proposed conditions. The following SWM block sizes and volumes are listed below and presented in the SWM preliminary grading plan:

• SWM dry facility (north)
SWM block size = 0.66 ha
25 mm storm event volume = 206 m3 and 250 Years storm event volume = 1,395 m3

• SWM wet facility (south)
SWM block size = 3.64 ha
25 mm storm event volume = 2,505 m3 and 250 Years storm event volume = 11,890 m3

The two proposed SWM facilities east of Richmond Street can provide adequate quantity control to match existing flow rates for the entire property and it is possible that no quantity control will be required west of Richmond Street, however, quality controls will be required for all future development west of Richmond St.

Proposed Zoning By-Law Amendment

The subject lands are currently zoned as Future Development (FD) and small part is zoned as Environmental Protect (EP) Zone. The proposed development is requiring a Zoning By-Law amendment from the current zoning to “Residential First Density” R1 (*), “Residential Third Density” R3(*), and “Open Space” OS. This amendment will complement the current Land Use Designation of the subject lands.

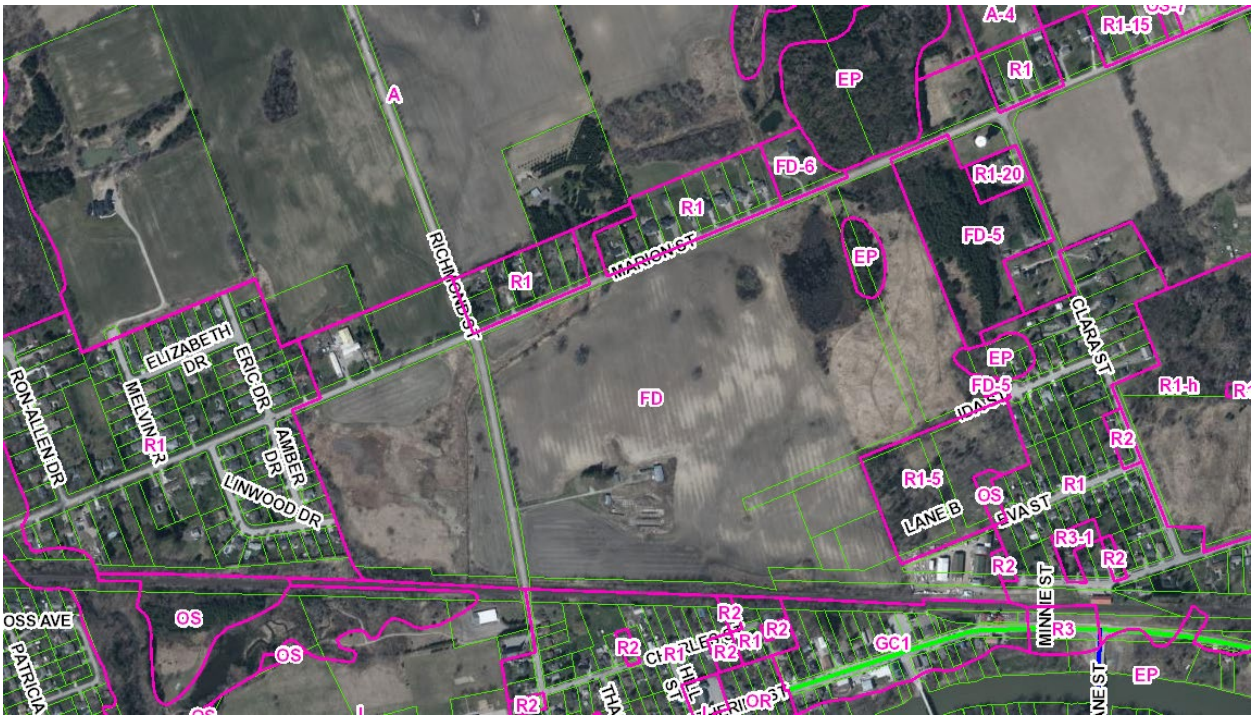


Figure 7: Zoning Map of Subject Lands and Abutting Properties

It is important to note that the proposed zoning for the development of subject land is aligned with those around the property. Properties to the north of the subject lands are zoned “Residential First Density” (R1). To the east, it is still currently zoned as “Future Development” (FD) as these lands are still vacant. South side of the property is zoned as R2 and Open Space (OS). To the west, it is zoned as “Residential First Density” (R1).

The proposed zoning schedule represents an opportunity for the County of Middlesex and the Municipality of Thames Centre to create significant housing unit yield.

Planning Policy Analysis

The Provincial Policy Statement (PPS), issued under the authority of Section 3 of the Planning Act “provides policy direction on matters of provincial interest related to land use planning” in order to ensure efficient development and the protection of resources. All planning applications are required to be consistent with these policies.

In this analysis section, relevant policies are *bordered and in italics*, with discussion on how the proposed application is consistent with that policy immediately after.

Section 1.1.1

Healthy, liveable, and safe communities are sustained by:

a. promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term.

b. accommodating an appropriate range and mix of residential (including second units, affordable housing and housing for older persons), employment (including industrial and commercial), institutional (including places of worship, cemeteries and long-term care homes), recreation, park and open space, and other uses to meet long-term needs.

e. promoting cost effective development patterns and standards to minimize land consumption and servicing costs.

The proposed residential development is an illustration of efficient use of land for development, especially given that the lands are within the “Settlement Area”. While specific forms of housing have not yet been proposed, it is anticipated that a range of low and medium density housing types, such as single detached dwellings and townhouses, could be developed in order to help meet long-term housing needs.

The subject lands are located within the Dorchester's "Settlement Area" and are surrounded by lands currently used as residential. Development of the lands residential uses would represent cost effective development and minimize land consumption and servicing costs. Furthermore, development of the subject lands would result in significant development charge (DC) revenue for the Municipality and the County, in addition to additional tax revenue.

> ***Section 1.1.2***
>
> *Sufficient land shall be made available to accommodate an appropriate range and mix of land uses to meet projected needs for a time horizon of up to 20 years. However, where an alternate time period has been established for specific areas of the Province as a result of a provincial planning exercise of a provincial plan, that time frame may be used for municipalities within the area.*
>
> *Within settlement areas, sufficient land shall be made available through intensification and redevelopment and, if necessary, designated growth areas.*
>
> *Nothing in policy 1.1.2 limits the planning for infrastructure and public service facilities beyond a 20-year time horizon*

The subject lands are currently designated as "Residential" with the intention of accommodate residential uses. It is appropriate to consider rezoning them from Future Development to Residential to give way for the proposed development. The proposed residential uses are great solution to the high demand for housing and the need for housing affordability. As the subject are already within the UGB, they may be considered for urban land uses, such as low and medium density residential uses, without the need for a municipal comprehensive review. As demonstrated later in this report, residential uses are the most appropriate urban land use for the subject lands.

> ***Section 1.1.3.1***
>
> *Settlement areas shall be the focus of growth and development, and their vitality and regeneration shall be promoted.*

The subject lands are within a settlement area and are specifically identified as being within the Dorchester Settlement Area. The subject lands are an appropriate and logical location for proposed development.

Section 1.1.3.2

Land use patterns within settlement areas shall be based on:

a. densities and a mix of land uses which:

1. efficiently use land and resources;

2. are appropriate for, and efficiently use, the infrastructure and public service facilities which are planned or available, and avoid the need for their unjustified and/or uneconomical expansion;

4. support active transportation

The proposed re-zoning of the subject lands to permit residential development is consistent with the PPS intent to provide an appropriate mix of land uses and densities. The subject lands may be developed for a wide range of appropriate densities under the permitted uses of the proposed zoning (R1 and R3). Re-zoning to permit a range of residential densities will make efficient use of land and infrastructure. Given the Municipality's guidelines on active transportation, new road networks and subdivision design will support active transportation.

Section 1.1.3.4

Appropriate development standards should be promoted which facilitate intensification, redevelopment, and compact form, while avoiding risks to public health and safety.

Development of the subject lands would implement existing OPA standards to facilitate an appropriate form of development, including a compact form. There are no anticipated risks to public health and safety as part of the proposed ZBA and Plan of Subdivision.

Section 1.1.3.6

New development taking place in designated growth areas should occur adjacent to the existing built-up area and shall have a compact form, mix of uses and densities that allow for the efficient use of land, infrastructure, and public service facilities.

The subject lands are located adjacent to existing subdivisions. The draft plan prepared for the subject lands denotes connections to roads in these subdivisions, logically extending into the subject lands in a similar road network and supporting connectivity of

the area. The proposed subdivision proposed a varied range of housing types to make efficient use of land, infrastructure, and public service facilities.

> ***Section 1.4.1***
>
> *To provide for an appropriate range and mix of housing types and densities required to meet projected requirements of current and future residents of the regional market area, planning authorities shall:*
>
> *a) maintain at all times the ability to accommodate residential growth for a minimum of 10 years through residential intensification and redevelopment and, if necessary, lands which are designated and available for residential development; and*
>
> *b) maintain at all times where new development is to occur, land with servicing capacity sufficient to provide at least a three-year supply of residential units available through lands suitably zoned to facilitate residential intensification and redevelopment, and land in draft approved and registered plans.*

Re-zoning of the subject lands would expand the Municipality's and the County's ability to accommodate residential growth in a manner that responds to the demand for range and mix of housing types.

The subject lands serve as an opportunity to generate additional inventory residential without the need to expand the settlement area limits as defined by the "Settlement Boundary". It is noted that the policies of Section 1.4.1 above prescribe minimum time frames for supply, and, importantly, do not provide a maximum time frame. In this regard, zoning of the subject lands for residential uses may be considered even if the Municipality, and the County has sufficient supply over the 10-year horizon. It is important to note that these lands have the potential to generate the largest housing unit yield compared to any other vacant parcel on the north side of the Thames River.

> ***Section 1.4.3***
> *Planning authorities shall provide for an appropriate range and mix of housing types and densities to meet projected requirements of current and future residents of the regional market area by:*
>
> *c) directing the development of new housing towards locations where appropriate levels of infrastructure and public service facilities are or will be available to support current and projected needs;*
>
> *d) promoting densities for new housing which efficiently use land, resources, infrastructure and public service facilities, and support the use of active transportation and transit in areas where it exists or is to be developed;*

As demonstrated in the attached Hunter Subdivision Servicing Feasibility Study (prepared by Stantec) water servicing is generally available as is access to the boundary road network. The absence of sanitary servicing and stormwater management infrastructure in the vicinity of development will require the implementation of the proposed strategy as detailed on the said study to service the development. Re-zoning of the subject lands would permit an appropriate range of housing to meet projected demand which would efficiently use land and infrastructure.

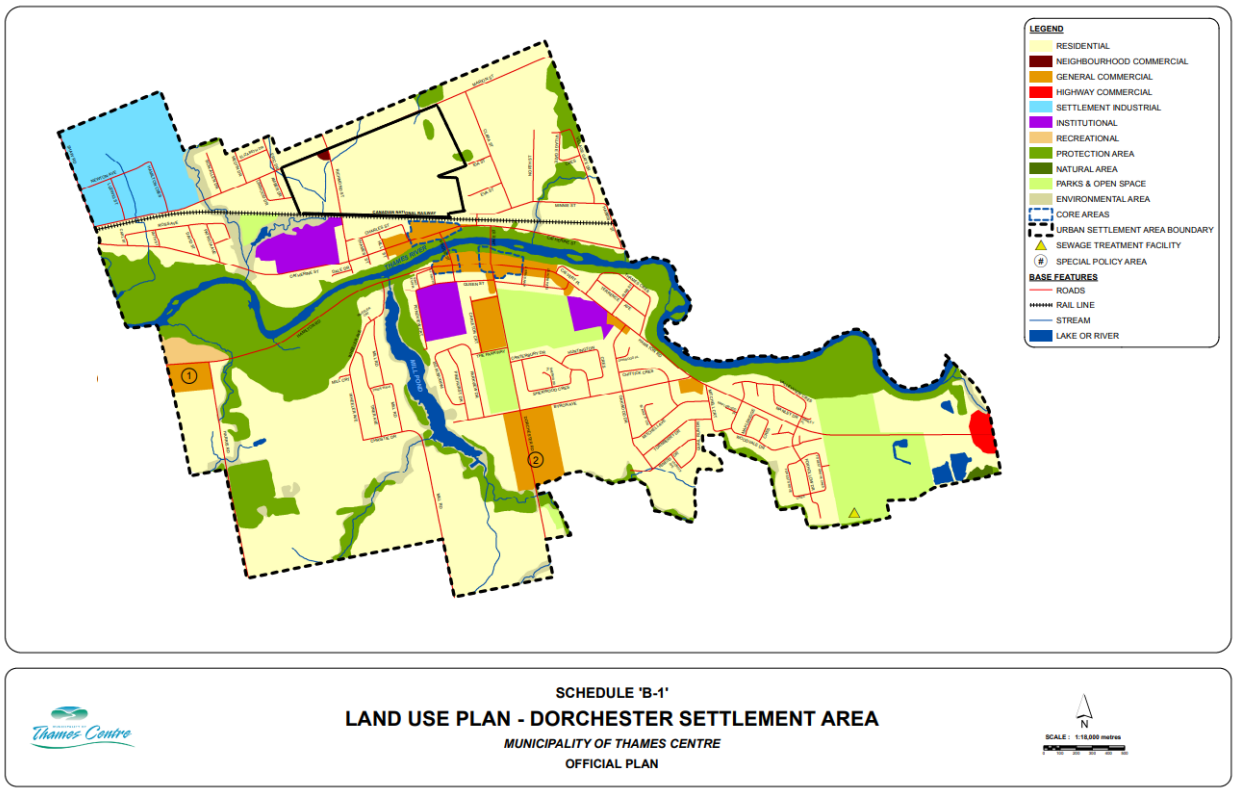
> ***Section 1.6.6.1***
>
> *Long-term economic prosperity should be supported by:*
>
> *a) promoting opportunities for economic development and community investment-readiness;*
>
> *b) optimizing the long-term availability and use of land, resources, infrastructure, electricity generation facilities and transmission and distribution systems, and public service facilities;*

Development of the subject lands will promote opportunities for economic development in the form of additional housing construction, and the long-term expansion of housing supply. Auburn Developments is committed to investing in the development of these lands, subject to appropriate municipal approvals.

Development of the lands will also optimize the long-term availability and use of the land for a high-demand use, being various forms of low and medium density uses.

2004 Municipality of Thames Centre Official Plan

The subject lands are located within the Dorchester Settlement Area and are designated mostly *"Residential". Small part is currently designated as "Neighborhood Commercial" and "Protection Area".*



The Municipality of Thames Centre Official Plan:
4.1.2 GOALS-Settlement Area

(3) To establish a land use pattern that ensures that services and utilities are efficiently utilized.

(5) To encourage new development on municipal water and sewage disposal systems.

(7) To ensure that Dorchester and Thorndale are strengthened as the primary focal points of community life and commerce.

(8) To ensure that new development and redevelopment are compatible with existing or planned neighbouring land uses.

Given that the proposed development supports the following goals that are applied to all Settlement Areas in the Municipality, it is logical to consider the proponents application for rezoning and plan of subdivision. It also satisfies the policies for all settlement area designation under vacant residentially designated areas. This policy specifies that in vacant areas designated for residential purposes, a suitable mix of housing types should be provided while ensuring that the overall density restrictions are not exceeded and that conflicts do not occur between housing types. It also stipulates that internal road networks should be designed to ensure good access to the major road network while discouraging through traffic.

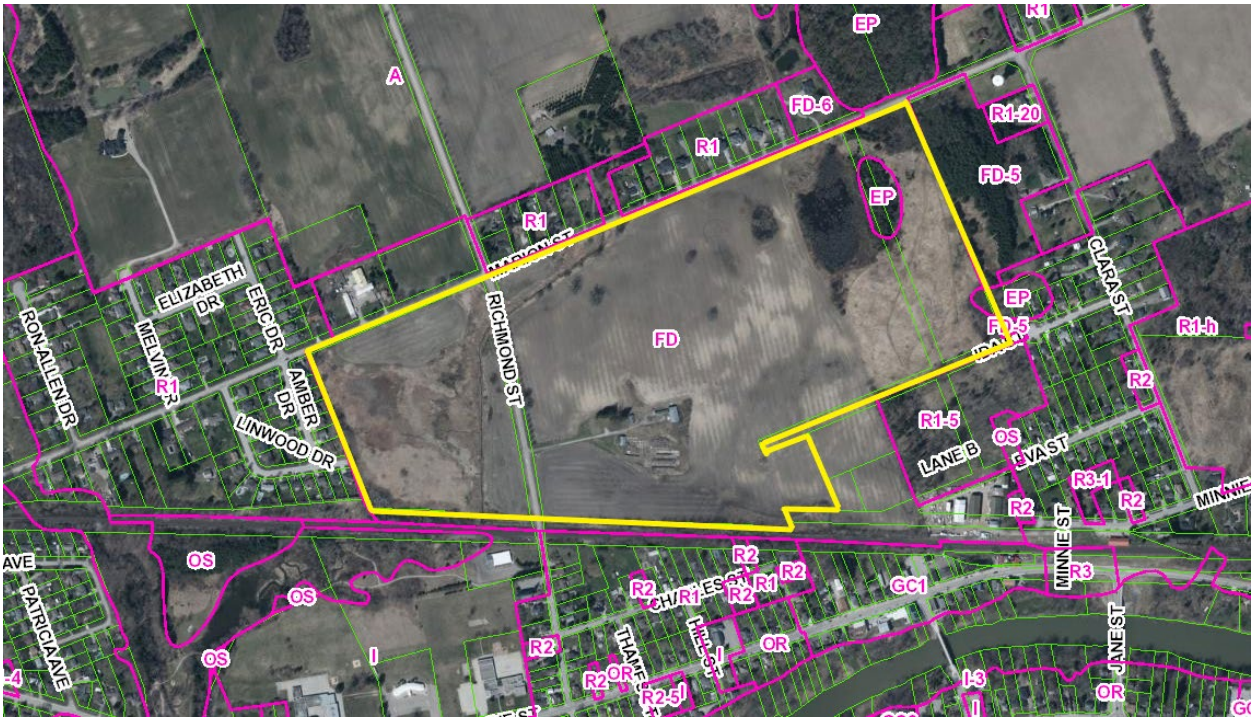
The proposed development made provisions for a range of housing types, sizes, price and tenure arrangements in order to provide accommodation for households of differing socio-economic characteristics. It also considered the road network design so that continuous secondary, interior access roads will result between adjacent subdivisions. The Cul-de sac present on Linwood Drive extension was designed due to having no existing viable through-street connection. As seen on the figure above, there is an existing stream on the subject lands which are proposed to be left as an open space, thus, no street connections can be designed in that area.

Under Dorchester Settlement Area, the subject lands are designated as “Residential”, “Neighborhood Commercial”, and “Protection Area”. The proposed development supports the goal of the residential area as it aims to provide for the housing needs of existing and future residents mainly within the Settlement Areas of Dorchester. As for the “Protection Area”, it is proposed to be left as an open space. The Environmental Impact Study made by MTE Consultants demonstrates that there will be no negative impacts on the natural features on this area.

Overall, the proposed development is aligned with its current Official Plan Designation; thus, no amendment is required. Given that the subject lands are within the Dorchester Settlement Area, are vastly designated as residential, and are located abutting lands that are currently being used as residential, it is appropriate for the Municipality and the County to consider the Zoning By-Law Amendment application and the Plan of Subdivision application made for the said proposed development.

Municipality of Thames Centre Zoning By-Law

The subject lands are zoned “Future Development” (FD), and “Environmental Protect” (EP). The FD zone applied to the majority of the property while the EP zone applies to a small part in the northeast portion of the property.



The existing zone requires that no person shall within any Future Development (FD) Zone, use any lot or erect, alter or use any building or structure for any purpose except for its existing use. This clearly negates the current designation of the subject lands in the Municipality of Thames Centre Official Plan. It is currently designated as residential; thus, it would be beneficial for the Municipality and the County to consider the application to have the said lands rezoned as well. The proposed development is requiring a Zoning By-Law amendment from the current FD zone to “Residential First Density” R1 (*), “Residential Third Density” R3(*). The proposed R1 zone will allow development of low-density residential dwellings such as single detached, and the R3 zone will allow development of medium-density dwellings such as townhouses. The proposed zoning schedule represents an opportunity for the County of Middlesex and the Municipality of Thames Centre to create significant housing unit yield.

As for the EP zone, it is stated that no person shall within any Environmental Protection (EP) Zone, use any lot or erect, alter or use any building or structure for any purpose except for one or more of the following EP Zone uses, namely:

(1) boat dock or ramp;
(2) conservation use;
(3) existing agricultural use;

(4) wildlife preserve;
(5) works of a conservation authority.

The development is proposing Zoning By-Law amendment from the current EP zone to “Open Space” OS. Under OS Zone, it is indicated that No person shall within any Open Space (OS) Zone, use any lot or erect, alter or use any building or structure for any purpose except for one or more of the following OS Zone uses, namely:

(1) conservation use;
(2) forestry use;
(3) open space;
(4) park, public;
(5) wildlife preserve;
(6) works of a conservation authority.

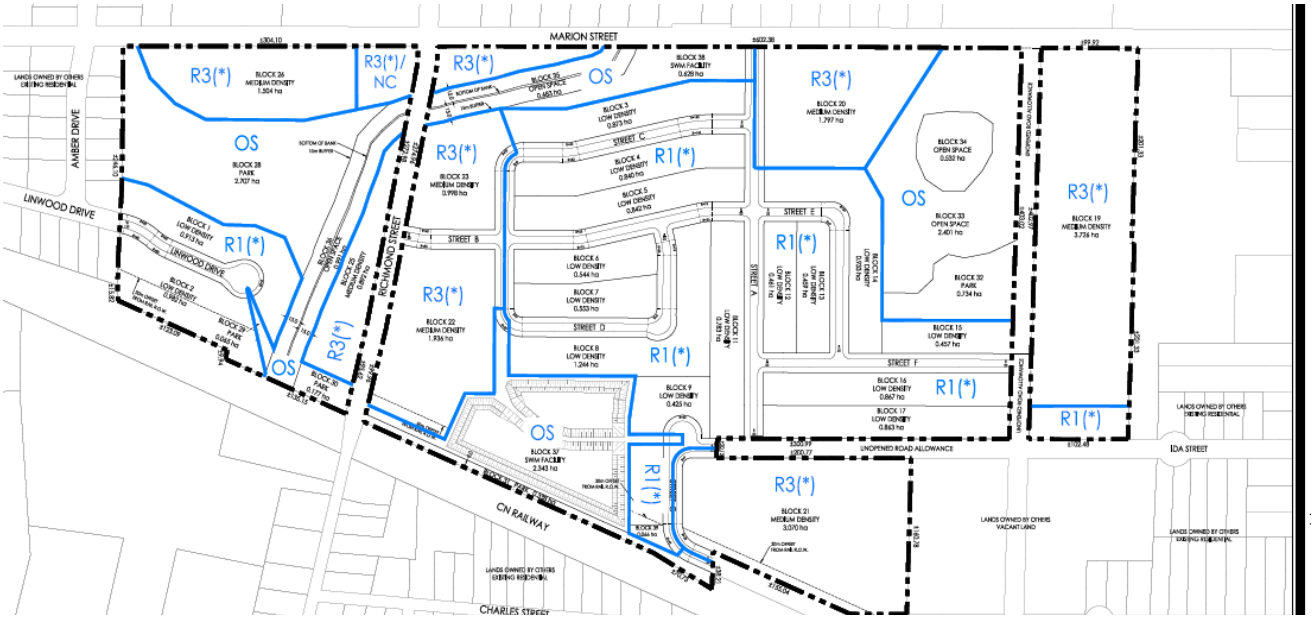


Figure 8: Proposed Zoning Schedule

It is noted that the zoning schedule plan is subject to change as refinement of the subdivision progresses. However, the zones discussed above provide a reasonably accurate and achievable zoning framework for the appropriate development of the subject lands.

Other Considerations

Servicing

As per the attached Preliminary Servicing Feasibility Study from Stantec, the subject lands can be appropriately and viably serviced through installation of a pumping station on the south portion of the site (Block 39). As for the SWM, it is proposed to create two

stormwater management facilities (SWMF) on the north and south property limits on Parcel #2. The north SWMF will ultimately discharge into Sandusky Drain. The south SWMF will outlet to an open channel parallel to CN Railway and run west under Richmond Street via a proposed culvert and discharge into Sandusky Drain. Parcel #1 (West of Richmond Street) will not have a SWM facility and instead will require on-site measures to provide quality control. Quantity control can be provided by over-controlling runoff in SWM facilities east of Richmond Street.

For the sanitary servicing, in order for the subject lands to develop, the site would require the sanitary sewer system to be constructed in accordance with the Municipality of Thames Centre Water and Wastewater Master Plan (2019) preferred strategy for sanitary servicing of the North Dorchester area, much of the contemplated capital works would be within its boundary. The preferred strategy would establish a new North Dorchester Sanitary Pump Station (SPS) which would provide the necessary sanitary outlet for the proposed gravity sewers and forcemain from surrounding developments including subject site. The subject site is therefore instrumental and likely the first development trigger required to move forward with the preferred strategy for servicing North Dorchester.

Environmental

The Municipality of Thames Centre requires natural heritage studies to be completed where development or site alteration is proposed entirely or partially within the distances adjacent to Natural Heritage System components set out in Policy 3.2.3.1 in the Municipality of Thames Centre Official Plan (Consolidated 2020). Since the proposed development within 50 m of a Group B Feature, is within 120 m of Unevaluated Wetlands (UTRCA), and because of UTRCA Flood Hazard Regulations, an Environmental Impact Study was completed for the proposed development.

The proposed development will retain wetland Communities 2 and 3 and associated Significant Wildlife Habitat through establishment of a buffer. The Significant Woodland in the northeast corner of the Subject Lands will also be retained within the buffer from Community 3. The setback area should be naturalized to establish an enhanced buffer between the proposed development and the adjacent significant natural heritage features and functions. The development proposes the removal of Community 5 (not significant) and the removal of portions (edges) of Community 8. Compensation will be achieved through the creation of wetland in Community 9, directly adjacent retained portions of Community 8. A buffer from the created and current wetland will be established at detailed design.

Recommendations are specified to protect the significant natural heritage features from indirect impact. Provided these are met, as per MTE’s expert opinion, the proposed development can proceed.

Conclusion

The proposed ZBA and Plan of Subdivision presents an opportunity to the Municipality and to the County to address the housing issue currently present in Dorchester. The subject lands are appropriately located to accommodate residential uses. The proposed ZBA to permit low-density and medium-density residential development is consistent with the intent and the policies of the Provincial Policy Statement. Re-zoning and the Plan of Subdivision application of the subject lands for residential uses is desirable and appropriate and is in keeping with the purpose and intent of the Municipality of Thames Centre Official Plan.

HUNTER SUBDIVISION SERVICING FEASIBILITY STUDY

June 1, 2022

Prepared for:
Auburn Developments Inc.

Prepared by:
Stantec Consulting Ltd.
171 Queens Ave.
London, ON N6A 5J7
Tel: 519-645-2007
Fax: 519-645-6575

Project Number:
161414095

This document entitled Hunter Subdivision Servicing Feasibility Study was prepared by Stantec Consulting Ltd. (“Stantec”) for the account of Auburn Developments Inc. (the “Client”). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec’s professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by: Dan Vucetic, MESc., P.Eng.

Reviewed by: _____

Signature

Approved by: Tim Stubgen, P.Eng

Signature

Table of Contents

1 INTRODUCTION

1.1 PURPOSE OF REPORT

This report has been prepared for the information of Auburn Developments Inc. to provide background information and servicing strategy on the development of the property located at 1598 Richmond Street in the Town of Dorchester in accordance with the Draft Plan of Subdivision, included in Appendix 'A'. This report provides general background information regarding the property, its preliminary servicing information including discussions of storm servicing and the provision of stormwater management, sanitary servicing and connection to existing downstream sewers, and connection to the Town of Dorchester's municipal water supply system.

1.2 LOCATION

The lands are municipally addressed as Mun No. 1598 Richmond Street in the Town of Dorchester. The area of the subject site is approximately 44 hectares (108.6 acres), and the site is situated directly north of the CN railway tracks, directly south of Marion Street, east of Linwood Drive, and west of Clara Street. The site is located within the Dorchester Settlement Area of the Municipality of Thames Centre Official Plan.

2 LIMITATION OF REPORT

The information presented in this report is based on the review of the following information:

- As-constructed drawings on file with the Municipality of Thames Centre;
- Municipality of Thames Centre Engineering Design Standards and Specifications;
- The Hunter Property Draft Plan of Subdivision as prepared by Stantec Consulting Ltd.;
- Preliminary Geotechnical Investigation as prepared by EXP Services Inc., dated June 2021;
- Hydrogeological Assessment (Preliminary Report) as prepared by EXP Services Inc., dated January 19, 2022;
- Municipality of Thames Centre 2021 Development Charges Background Study: and,
- Municipality of Thames Centre Water and Wastewater Master Plan Update – Master Plan Report, prepared by GM BluePlan, dated August 2019.

3 Site Characteristics

3.1 Existing Land Use and Topography

The site is undeveloped at the present time, with the exception of the existing farm buildings located east of Richmond Street. There are five buildings located on the site, which appear to be a dwelling unit and accessory structures, based on aerial photos. The remaining property has been used for agricultural purposes, primarily crop production up to the present time.

Site elevations range from approximately 273 metres in the northeast corner to approximately 255 metres along the southern property line. The site topography generally slopes downwards towards the CN Railway tracks, but there is a significant ridge that is oriented in the east-west direction. While the average site slope is approximately 2%, there are portions of the ridge with slopes approaching 13%.

An initial analysis of the existing grades indicates that the existing topography does not preclude development on any portion of the property. However, substantial earthworks will likely be required in localized areas to flatten the east-west ridge.

3.2 Site Access

The northern property line borders Marion Street, with approximately 1050 m of frontage. Richmond Street crosses the property and provides approximately 400 m of frontage to both west and east lands. Additionally, the Middlesex County mapping shows unopened road allowances that extend westward into the subject site from Ida Street, Eva Street, and Minnie Street, which could provide access to the property from Clara Street.

4 Sanitary Servicing

4.1 Existing Sanitary Services

There is currently no sanitary sewer servicing for the subject site, and no existing local sanitary sewers crossing of the Thames River.

The existing Dorchester wastewater treatment plant (WWTP) is located on the south side of the Thames River near the Dorchester Fairgrounds.

4.2 Proposed Sanitary Servicing

The most recently completed sanitary servicing study that includes the subject lands is the Municipality of Thames Centre Water and Wastewater Master Plan Update – Master Plan Report, prepared by GM BluePlan and dated August 2019.

In order for the subject lands to develop, the site would require the sanitary sewer system to be constructed in accordance with the Municipality of Thames Centre Water and Wastewater Master Plan (2019) preferred strategy for sanitary servicing of the North Dorchester area, much of the contemplated capital works would be within its boundary. The preferred strategy would establish a new North Dorchester Sanitary Pump Station (SPS) which would provide the necessary sanitary outlet for the proposed gravity sewers and forcemain from surrounding developments including subject site (illustrated in Figure 1 & Figure 2 below). The subject site is therefore instrumental and likely the first development trigger required to move forward with the preferred strategy for servicing North Dorchester.

Refer to Appendix ‘A’ for the subject site proposed preliminary sewer routing details, including depth and how the intended lands which include lands external to the proposed development can ultimately flow by way of a gravity sewer to the proposed North Dorchester Sanitary Pump Station.

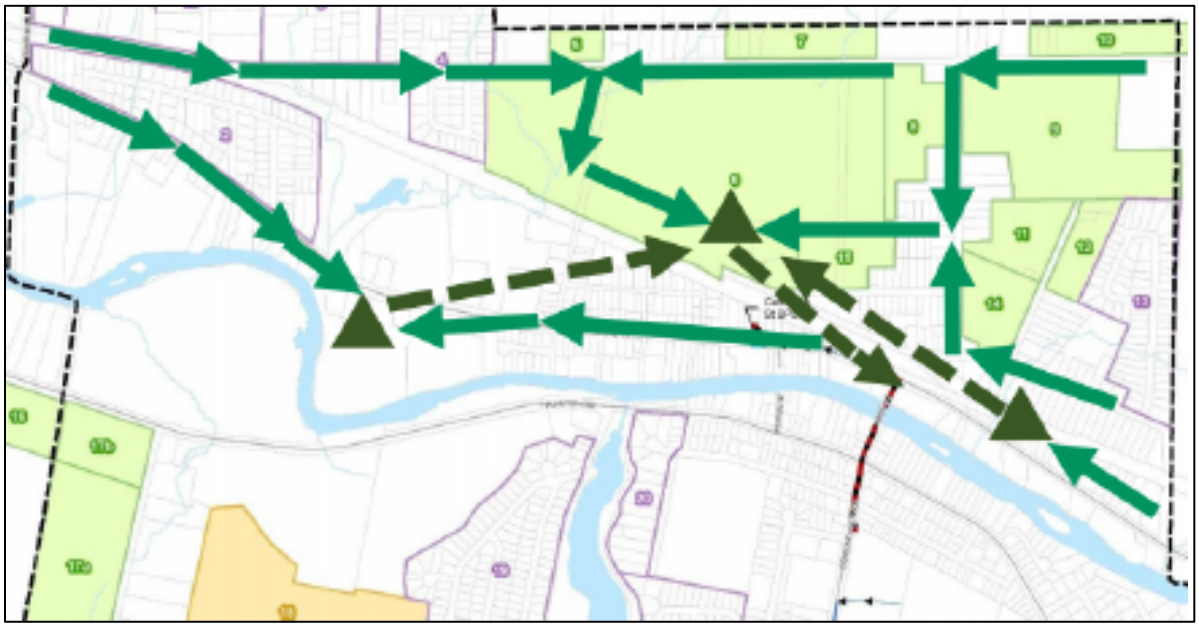


Figure 1. North Dorchester Preferred Sanitary Servicing Strategy as per Updated Master Plan (2019)

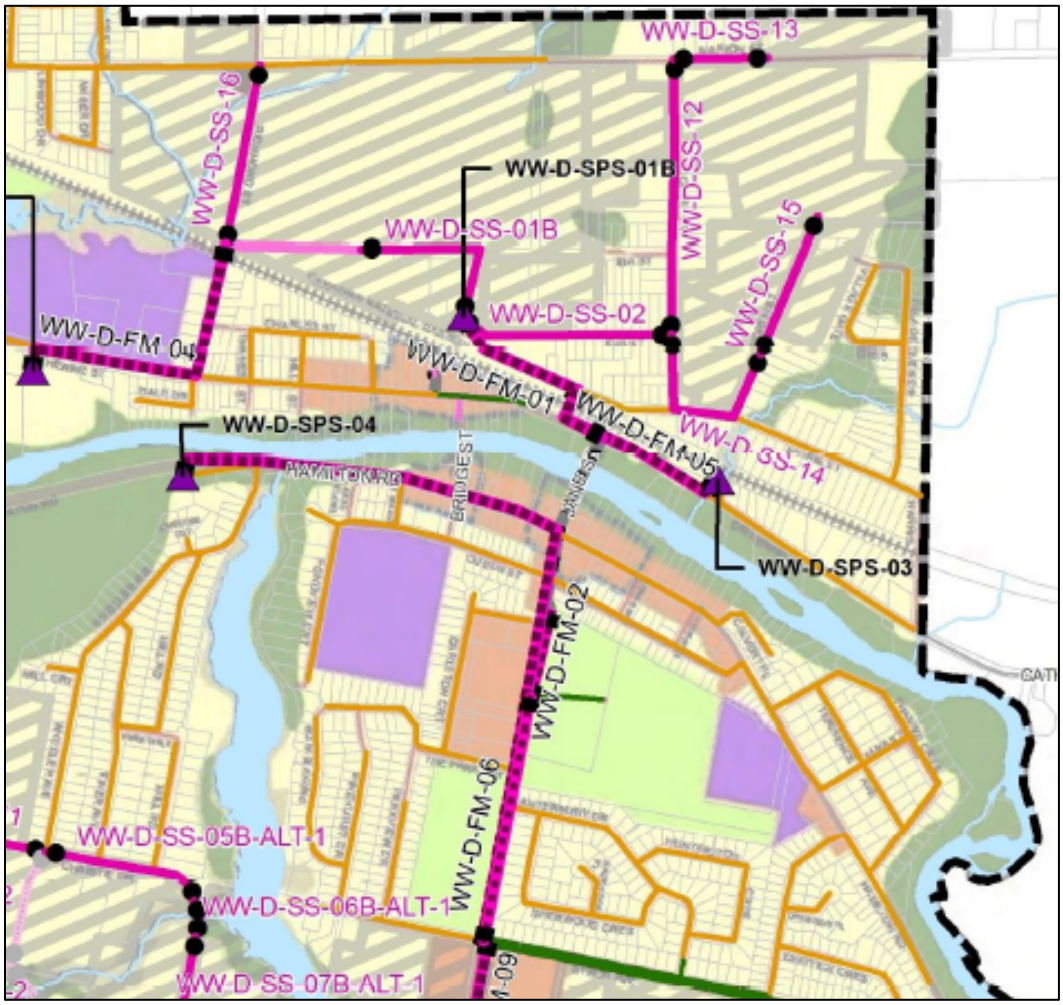


Figure 2. North Dorchester Preferred Sanitary Servicing Strategy Capital Works as per Updated Master Plan (2019)

The following is a list of anticipated capital works required to service the entirety of the subject site as identified in the Updated Master Plan along with accompanying estimated costs (2021 Estimate) and timing as per The Municipality of Thames Centre 2021 Development Charges Background Study:

- North Dorchester New Development Sanitary Pump Station (WW-D-SPS-01B) - $5,400,000 – Timing 2030
- North Dorchester New Development Forcemain (WW-D-FM-01) - New 300mm forcemain needed to support new development SPS for development blocks North of CN rail in North Dorchester – $1,418,500 – Timing 2030
- Dorchester Road Forcemain extension (WW-D-FM-02) – New 300mm forcemain from Dorchester Road bridge forcemain (Jane St) to Dorchester Road gravity sewers needed to support new

development SPS for development blocks North of CN rail in North Dorchester - $415,100 – Timing 2026

- Dorchester Road Forcemain extension (WW-D-FM-03) – New 300mm forcemain from Dorchester Road bridge forcemain (Jane Street) to Byron Ave 600mm diameter trunk sewers needed to support new development SPS for development blocks North of CN rail in North Dorchester – 1,013,700 – Timing 2026
- Richmond Street Sewer (WW-D-SS-16) - New 200mm diameter sanitary sewer to accommodate growth Northeast of new North Dorchester SPS - $587,300 – Timing 2037
- New Development SPS West Sewers (WW-D-SS-01B) New 300mm diameter sanitary sewer required for development blocks going to new Development SPS in North Dorchester - $558,800 – Timing 2026
- New Development SPS East Sewers (WW-D-SS-02) new 250mm diameter sanitary sewer required for development blocks going to new Development SPS in North Dorchester. - $811,900 – Timing 2030

The capital works listed above total estimated cost is $10,205,300.

The wastewater capital program (partially listed herein) will work as a foundation for the Municipality of Thames Centre's Capital Budget. The capital program provides a list and timing of new assets that the Municipality will have to operate and maintain; and therefore, it is the starting point for the planning of operation and maintenance costs and resources allocation for new wastewater infrastructure.

The funding source and timing was explicitly stated in the Municipality of Thames Centre 2021 Development Charges Background Study, however the timing for works can be suggested to coincide with the new development and based on the projected population and employment growth within the Municipality of Thames Centre. The funding (including availability) and timing of the infrastructure required for the Hunter Subdivision to proceed would have to be confirmed in discussion with the Municipality of Thames Centre.

4.3 Wastewater Treatment Plant Capacity

The existing Dorchester WWTP is located on the south side of the Thames River and uses a sequencing batch reactor secondary treatment process. The existing plant capacity is approximately 900 m^3/d and expected to achieve 1,200 m^3/d in 2022 with planned expansion. In 2017 only 56% of 520 m^3/d rated capacity at the time was utilized leaving substantial room for growth contribution.

The expansion to 1200 m^3/d is a part of the long-term plan to expand the WWTP to an ultimate capacity of 6,000 m^3/d, as indicated in the original Certificate of Approval (CofA) issued in June 1999, which was later amended in November 2000 for approval for the 2002 capacity expansion to 520 m^3/d.

4.4 Proposed Sewage Flow

We have assumed a design flow of 350 L/capita/day in calculating the anticipated subdivision sewage flow, which is consistent with current Municipality of Thames Centre standards. For the purpose of calculating the sewage flows, the Municipality's standard population densities for various land types were used. These densities are summarized as follows:

Table 1. Land Use Densities (Municipality of Thames Centre)

Land Use	Projected Density
Low Density Residential	30 units/ha @ 3 people/unit
Medium Density Residential	75 units/ha @ 2.4 people/unit

The estimated peak design flow for the full-build out of the Hunter Subdivision, using the above densities and the current Draft Plan of Subdivision, are detailed in the following table.

Table 2. Proposed Sanitary Flow (Municipality of Thames Centre)

Land Use	Area (ha)	Number of Units	Population
Low Density Residential	15.977	479	1437
Medium Density Residential	10.799	810	1944
Non-contributing Blocks and Rights-of-way	16.936	-	-
Total	43.712		3381
Total Peak Flow			**45.32 L/s**

As identified in the above table, the proposed site is approximately 44 ha which includes 479 single-family lots and 810 multi-family units for a total population of approximately 3381 persons. Based on an average daily flow of 350 L/capita/day, a total peak discharge of approximately 45.32 L/s is estimated for the entire development including infiltration allowance, and Harmon peaking factor.

5 Stormwater Management

5.1 Existing Site Drainage

The existing condition of the site is currently agricultural land. Various municipal drains cross through the site including Sandusky Drain, Hunter Branch, Porter Subdivision Drain and Hunt Drain, as shown in **Figure 3**.

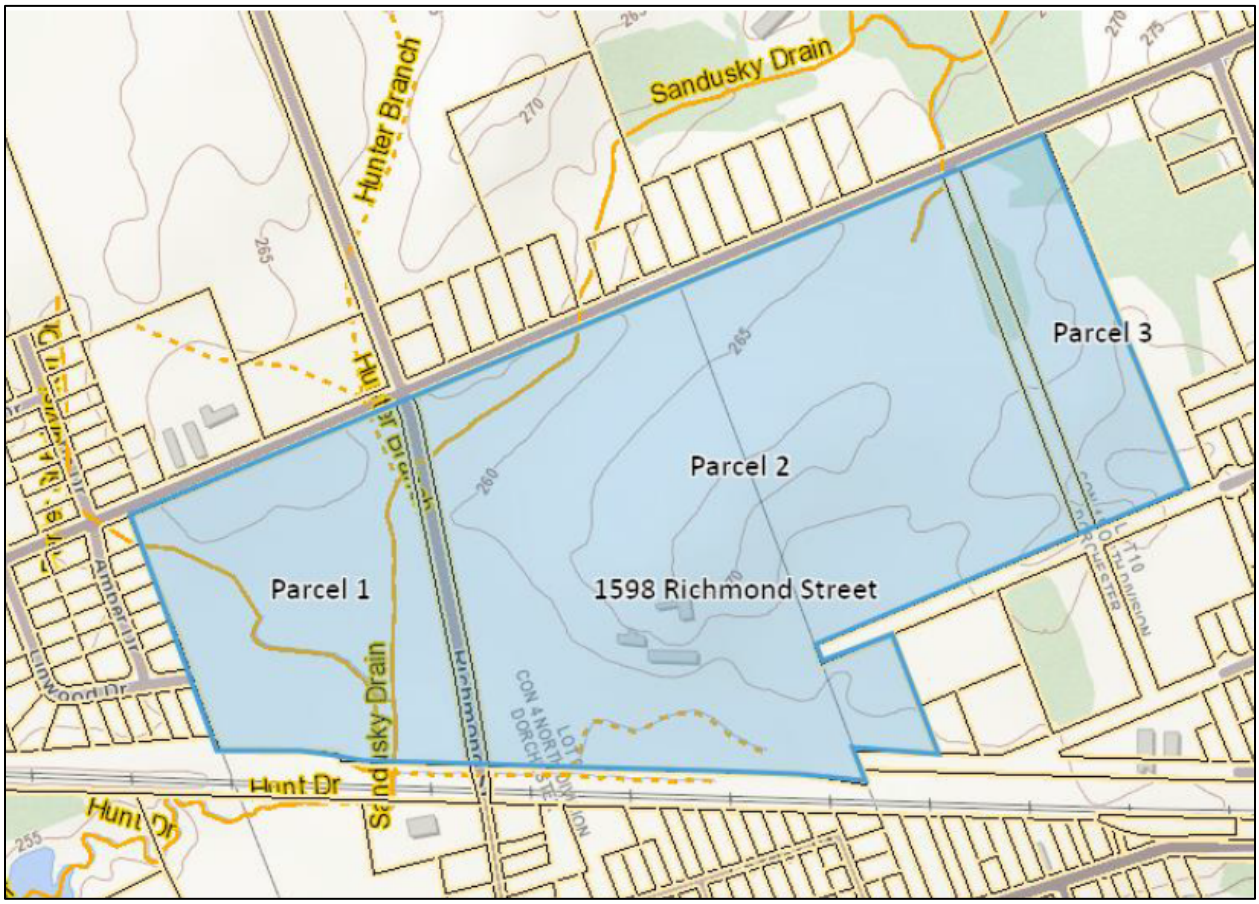


Figure 3. Site Existing Condition

The subject site generally drains from east to west, splitting into six catchment areas with the majority draining towards Sandusky Drain. The Hunt McMillian Drain flows through a culvert in the CN railroad embankment, then through approximately 600 m of open channel before discharging into the Thames River. The future stormwater collection system must be designed to accommodate the flows from the existing municipal drains. Incorporation of these drains into the storm sewer system for the subdivision will require the completion of a drainage report.

5.2 Proposed Stormwater Management Strategy

The preferred alternative for stormwater management would be to create two stormwater management facilities (SWMF) on the north and south property limits on Parcel #2. The north SWMF will ultimately discharge into Sandusky Drain. The south SWMF will outlet to an open channel parallel to CN Railway and run west under Richmond Street via a proposed culvert and discharge into Sandusky Drain.

Parcel #1 (West of Richmond Street) will not have a SWM facility and instead will require on-site measures to provide quality control. Quantity control can be provided by over-controlling runoff in SWM facilities east of Richmond Street. The stormwater management strategy and preliminary design is available in the Appendix 'B' as detailed in the Conceptual SWM Strategy Memo prepared by Stantec Consulting Ltd., dated May 16, 2022.

6 Municipal Water Servicing

6.1 Existing Water Services

A municipal water tower is located southwest of the Marion Street/Clara Street intersection. There is an existing 250 mm diameter PVC watermain located on Marion Street, along the northern property.

Additionally, an existing 150mm diameter watermain on Linwood Drive within the neighboring Maplewoods Estates subdivision to the west is available for connection as well as an existing 150mm diameter watermain on Richmond Street just south of the CN Railway.

Lastly, a 250 mm diameter existing watermain is located along Clara Street, which feeds 150 mm diameter watermains on Ida Street, Eva Street, and Minnie Street. Watermain on Ida and Eva Street are expected to be extended into the subject site during capital infrastructure projects.

The Thames Centre as-built plan and profile information illustrating watermain location as detailed herein is included in Appendix 'A'.

6.2 Existing System Supply

According to the 2019 Water and Wastewater Master Plan Update (WWMP), the municipality is conducting well exploration for additional groundwater sources needed for the proposed build-out of Dorchester. In the event no suitable groundwater is found, a connection can be made to Lake Huron and Elgin Area Primary Supply Systems to provide needed capacity. In the meantime, upgrades to the pump and well at Dorchester Water Treatment Facility (WTF) are expected to provide sufficient capacity and pressure to attain peak hour and fire flow conditions to the subject site. Expected timeline for pump and well upgrades is 2023.

Dorchester is currently a single pressure zone supplied by 8 production wells that are pumped and treated at Dorchester WTF. Dorchester operates one elevated tank to provide system head pressure, and

two underground 2500 m^3 reservoirs for storage and chlorine contact time used in the disinfection of groundwater.

Maximum annual permitted withdrawal volume is 2,681,086 m^3 as per the Permit to Take Water (PTTW) issued by the Ministry of Environment, Conservation and Parks (MECP). The current PTTW is slated to expire in May 2021, but changes to permitted water use is not expected to change. Percentage of actual annual withdrawal under present conditions is 453,380 m^3, which is 17% of total the allocated capacity.

If the assumed Average Day Demand (ADD) is taken to be 225L/cap/day (Table 2.1, Master Plan) with a maximum projected subdivision population of 3000 people, gives 675,000L/day (675 m^3/day) or 246,375 m^3/year. This conservative figure brings water utilization to 26.1% of the theoretical maximum capacity.

6.3 Proposed Water Servicing

It is understood per Municipality of Thames Centre Design Standards (2021) Water distribution systems ought to be designed so that no more than fifty (50) units with individual water services and meters are serviced from a single source of supply. Therefore, given the projected number of units for the proposed subdivision it is expected that secondary connection will be required for looping and supply redundancy.

It is anticipated available connections for new water service to the development will be at connection points as listed below. Ultimate watermain connection locations and sizes will be confirmed during detailed design and based on pressure and flow requirements of the proposed development.

- Water service connection for servicing proposed Linwood Drive from existing 150mm diameter watermain in Maplewoods Estates Subdivision
- Water service connection at Street A from existing 250mm diameter watermain on Marion Street
- Watermain extension of existing 150mm diameter watermain on Richmond Street north or alternatively extension from Marion Street 250mm watermain to service medium density block on Richmond Street and to provide secondary connection at Street B
- Watermain extension of existing 150mm diameter watermain on Ida Street
- Medium Density Blocks fronting Marion Street to be serviced off existing 250mm diameter watermain on Marion Street

7 Summary and Recommendations

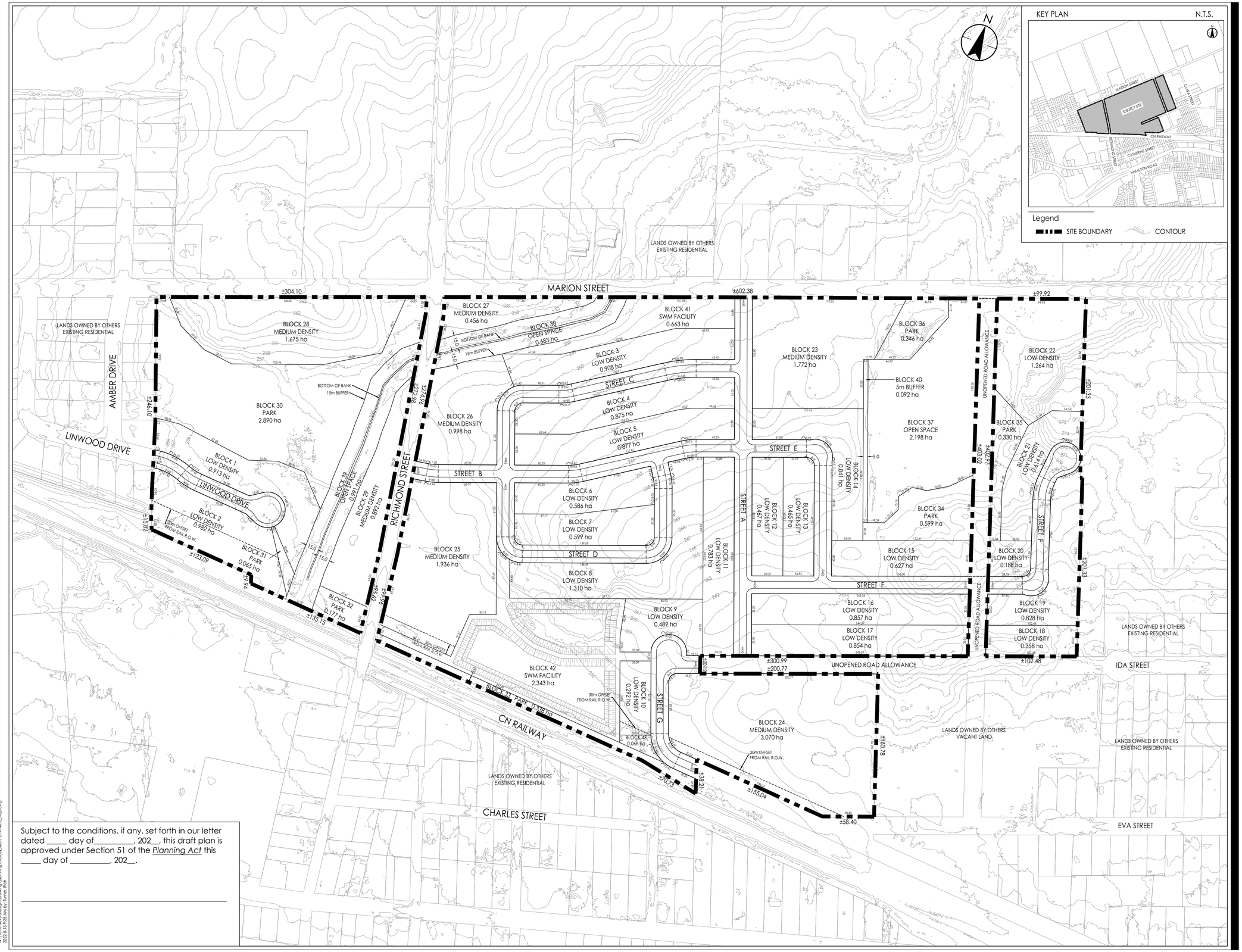
Water servicing is generally available as is access to the boundary road network. The absence of sanitary servicing and stormwater management infrastructure in the vicinity of development will require the implementation of the proposed strategy as detailed herein to service the development.

This report concludes that a sanitary outlet can be obtained through a funding formula with the Municipality, however, the agreement of the municipality and a significant up-front cost is required to develop due to external work required and benefit to growth in North Dorchester Area.

If you have any questions or concerns regarding the enclosed information, we would be pleased to meet or discuss with you further.

APPENDICES

Appendix A



Subject to the conditions, if any, set forth in our letter dated _____ day of_____, 202__, this draft plan is approved under Section 51 of the *Planning Act* this _____ day of _____, 202__.

_____

Stantec
600-171 Queens Avenue
London ON N6A 5J7
Tel. 519-645-2007
www.stantec.com

DRAFT PLAN OF SUBDIVISION HUNTER PROPERTY

PART OF
LOTS 9 & 10
CONCESSION 4
IN THE
TOWN OF DORCHESTER
COUNTY OF MIDDLESEX

INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT

A: AS SHOWN ON DRAFT PLAN
B: AS SHOWN ON DRAFT AND KEY PLAN
C: AS SHOWN ON DRAFT AND KEY PLAN
D: ACCORDING TO LAND USE SCHEDULE
E: RESIDENTIAL, AGRICULTURAL
F: AS SHOWN ON DRAFT PLAN
G: AS SHOWN ON DRAFT AND KEY PLAN
H: MUNICIPAL PIPED WATER TO BE INSTALLED
I : T.B.D.
J: AS SHOWN ON DRAFT PLAN
K: MUNICIPAL SANITARY AND STORM SEWERS TO BE INSTALLED
L: AS SHOWN ON PLAN

SCHEDULE OF LAND USE

LOW DENSITY RESIDENTIAL	- BLOCKS 1 - 22	15.977 ha
MEDIUM DENSITY RESIDENTIAL	- BLOCKS 23 - 29	10.799 ha
PARK	- BLOCKS 30 - 36	4.745 ha
OPEN SPACE	- BLOCKS 37 - 39	3.872 ha
5m BUFFER	- BLOCK 40	0.092 ha
SWM FACILITY	- BLOCKS 41 - 42	3.006 ha
PUMPING STATION	- BLOCK 43	0.066 ha
ROADS		5.155 ha
	TOTAL	43.712 ha

OWNER'S AUTHORIZATION

THE UNDERSIGNED AUTHORIZES THE PREPARATION AND SUBMISSION OF THIS DRAFT PLAN OF SUBDIVISION.

JAMIE CRICH, PRESIDENT
AUBURN DEVELOPMENTS INC.
AUTHORIZING AGENT

DATE

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LAND TO BE SUBDIVIDED, AS SHOWN ON THIS PLAN, AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

JEREMY C.E. MATTHEWS O.L.S.
STANTEC GEOMATICS

DATE

File Name: 161414095_c-cp	RT	BB	RT	22.05.12
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Client/Project

AUBURN DEVELOPMENTS INC.

HUNTER PROPERTY

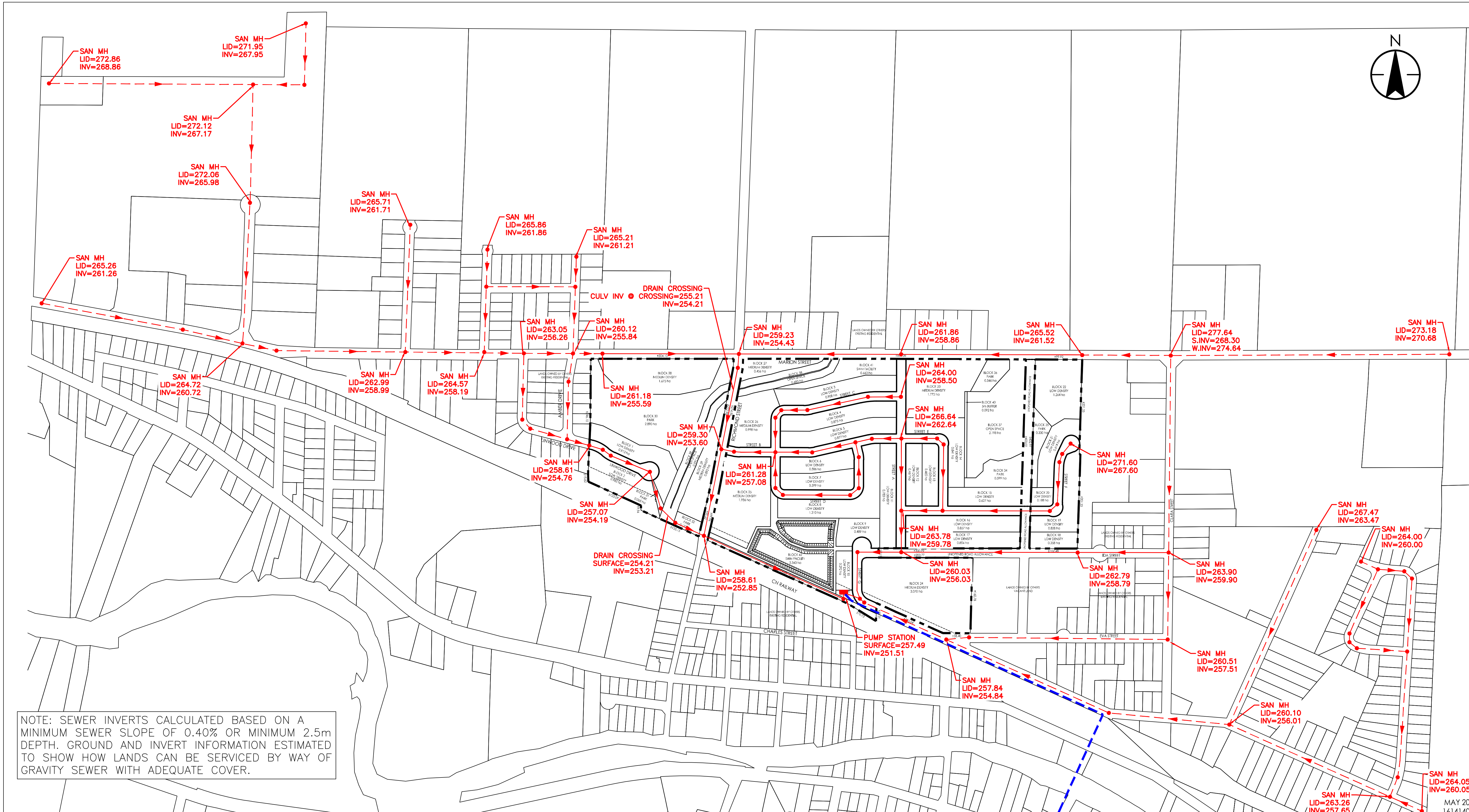
Dorchester, ON Canada

Title

DRAFT PLAN OF SUBDIVISION

Project No.	Scale	
161414095		HORZ – 1 : 2000 (20 0 40m)
Drawing No.	Sheet	Revision
1	1 of 1	

W:\161414095\design\drawing\planning\model_files\161414095_c-cp.dwg
2022-5-13 9:25 AM by: Turner, Rich



N
SAN MH LID=272.86 INV=268.86
SAN MH LID=271.95 INV=267.95
SAN MH LID=272.12 INV=267.17
SAN MH LID=272.06 INV=265.98
SAN MH LID=265.71 INV=261.71
SAN MH LID=265.86 INV=261.86
SAN MH LID=265.21 INV=261.21
SAN MH LID=265.26 INV=261.26
CULV INV @ CROSSING=255.21
DRAIN CROSSING INV=254.21
SAN MH LID=263.05 INV=256.26
SAN MH LID=260.12 INV=255.84
SAN MH LID=259.23 INV=254.43
SAN MH LID=261.86 INV=258.86
SAN MH LID=265.52 INV=261.52
SAN MH LID=277.64 S.INV=268.30 W.INV=274.64
SAN MH LID=273.18 INV=270.68
SAN MH LID=264.72 INV=260.72
SAN MH LID=262.99 INV=258.99
SAN MH LID=264.57 INV=258.19
SAN MH LID=261.18 INV=255.59
SAN MH LID=264.00 INV=258.50
SAN MH LID=266.64 INV=262.64
SAN MH LID=259.30 INV=253.60
SAN MH LID=271.60 INV=267.60
SAN MH LID=258.61 INV=254.76
SAN MH LID=261.28 INV=257.08
SAN MH LID=257.07 INV=254.19
SAN MH LID=263.78 INV=259.78
SAN MH LID=267.47 INV=263.47
SAN MH LID=264.00 INV=260.00
DRAIN CROSSING SURFACE=254.21 INV=253.21
SAN MH LID=258.61 INV=252.85
SAN MH LID=260.03 INV=256.03
SAN MH LID=262.79 INV=258.79
SAN MH LID=263.90 INV=259.90
PUMP STATION SURFACE=257.49 INV=251.51
SAN MH LID=260.51 INV=257.51
SAN MH LID=257.84 INV=254.84
SAN MH LID=260.10 INV=256.01
SAN MH LID=264.05 INV=260.05
SAN MH LID=263.26 INV=257.65
MARION STREET
RICHMOND STREET
AMBER DRIVE
LINWOOD DRIVE
CN RAILWAY
CHARLES STREET
IDA STREET
EVA STREET
NOTE: SEWER INVERTS CALCULATED BASED ON A MINIMUM SEWER SLOPE OF 0.40% OR MINIMUM 2.5m DEPTH. GROUND AND INVERT INFORMATION ESTIMATED TO SHOW HOW LANDS CAN BE SERVICED BY WAY OF GRAVITY SEWER WITH ADEQUATE COVER.
MAY 2022
161414095

V:\01614\active\161414095\design\drawing\report figures\dwg_161414095_san_route_fig.dwg
2022-5-24 7:48 AM by: Childs, Jason

Stantec

600-171 Queens Avenue
London ON N6A 5J7
Tel. 519-645-2007

Legend

- SITE BOUNDARY
- EXISTING SAN FORCE MAIN
- PROPOSED SANITARY GRAVITY SEWER
- FUTURE SANITARY GRAVITY SEWER

HORZ — 1 : 8000
80 0 160m

Client/Project

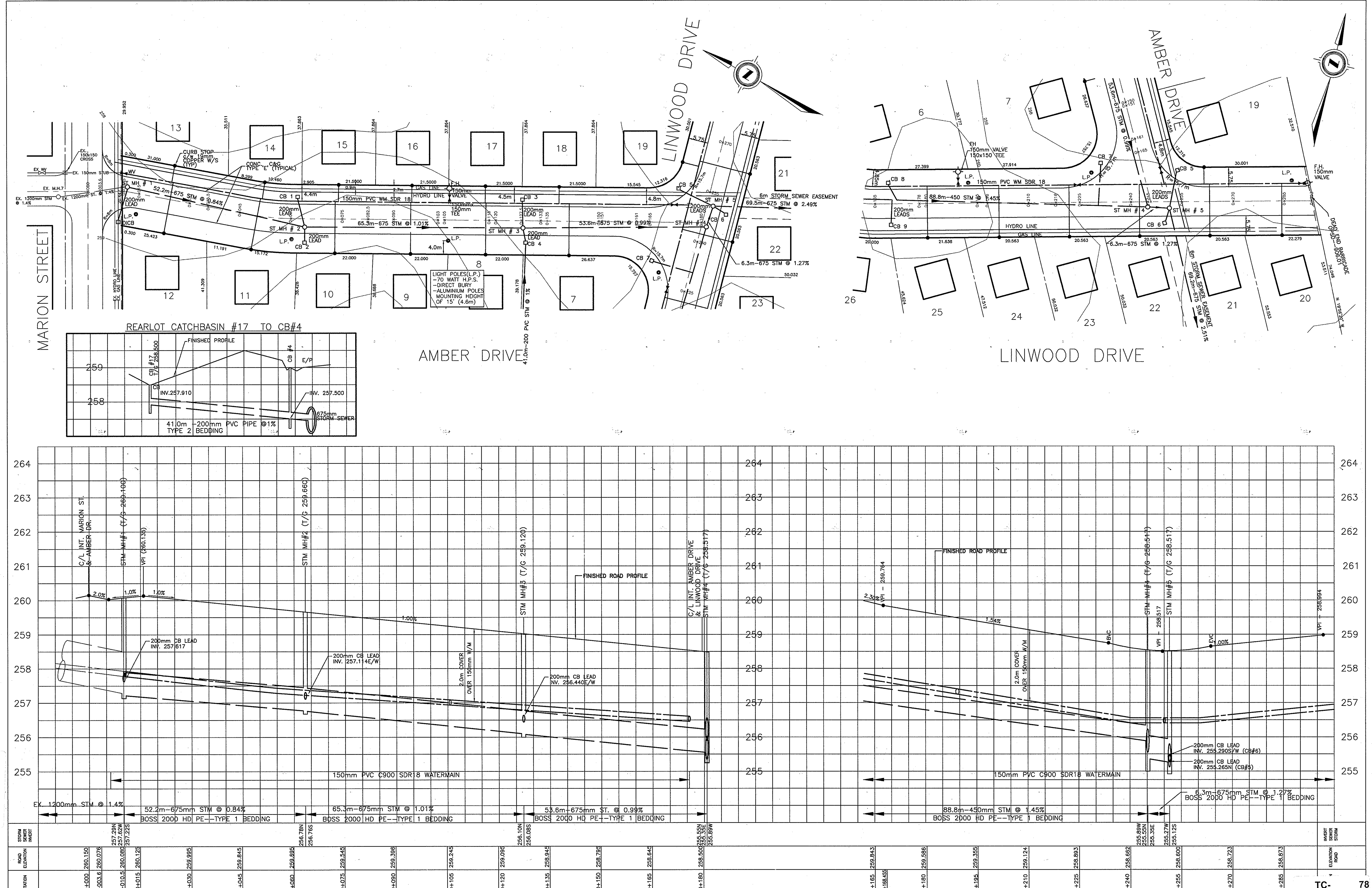
AUBURN DEVELOPMENT INC.
1598 RICHMOND STREET
Dorchester, ON Canada

Figure No.

1.0

Title

PROPOSED SANITARY ROUTING / DEPTH FIGURE



No.	REVISIONS	DATE	BY
1	FIRST SUBMISSION	04/02/94	JHV
2	REVISE GRADES AND DRAINAGE	03/08/94	JHV
3	FINAL REVISIONS	26/09/94	JHV
4	RELOCATE MH 6 AND HYDRANTS	17/11/94	JHV
5	AS CONSTRUCTED	19/03/00	EB

DESIGN JHV
DRAWN JHV
CHECKED JHV
APPROVED
DATE FEB 1994
235
CAD 23505_AB

CONSULTANT

J.H.VINCENT SERVICES
A DIVISION OF 509228 ONTARIO LIMITED
CIVIL ENGINEERING
449 LAWSON ROAD
LONDON, ONTARIO, N6G-1X9
PHONE: 472-9068 FAX: 472-4014

ENGINEER'S STAMP
REGISTERED PROFESSIONAL ENGINEER
J. H. VINCENT
03/19/2000
PROVINCE OF ONTARIO

PIONEER DEVELOPMENTS
344602 ONTARIO LIMITED
P.O.BOX 40081, LONDON, ONTARIO
N5W 5Z5

SCALE
HORIZONTAL - 1 : 500
VERTICAL - 1 : 50

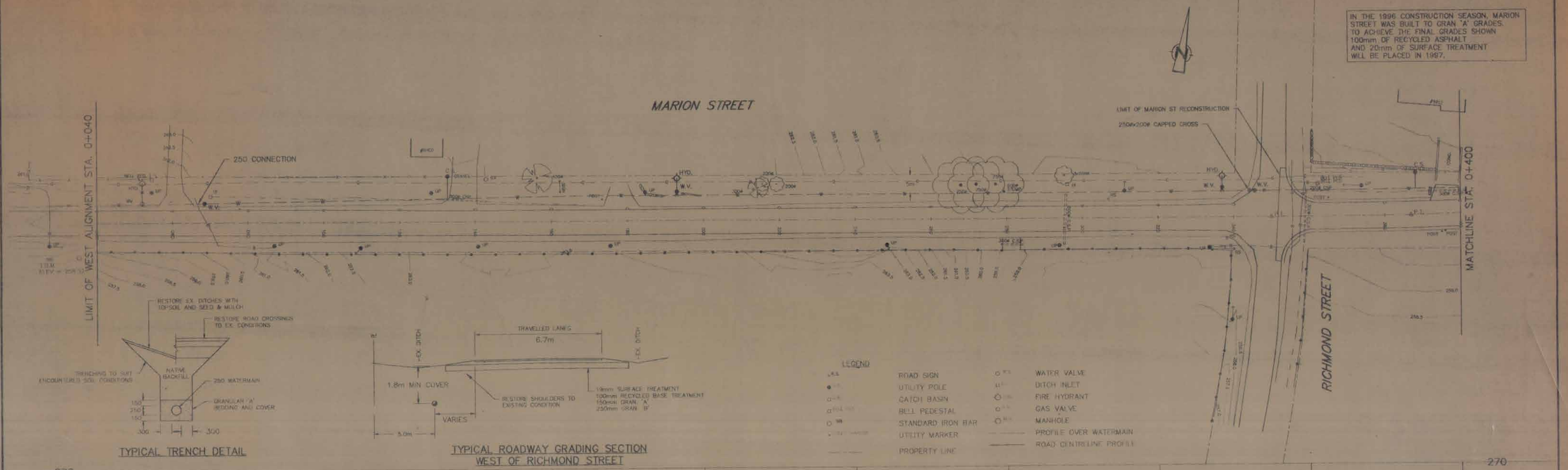
TITLE
MAPLEWOOD ESTATES SUBDIVISION
LOT 8, CONCESSION 4 NORTH OF THAMES RIVER
IN THE TOWNSHIP OF NORTH DORCHESTER
COUNTY OF MIDDLESEX

PLAN/PROFILE

PROJECT No. 93/32/235
SHEET No. 5
PLAN FILE No. 39 T 89016

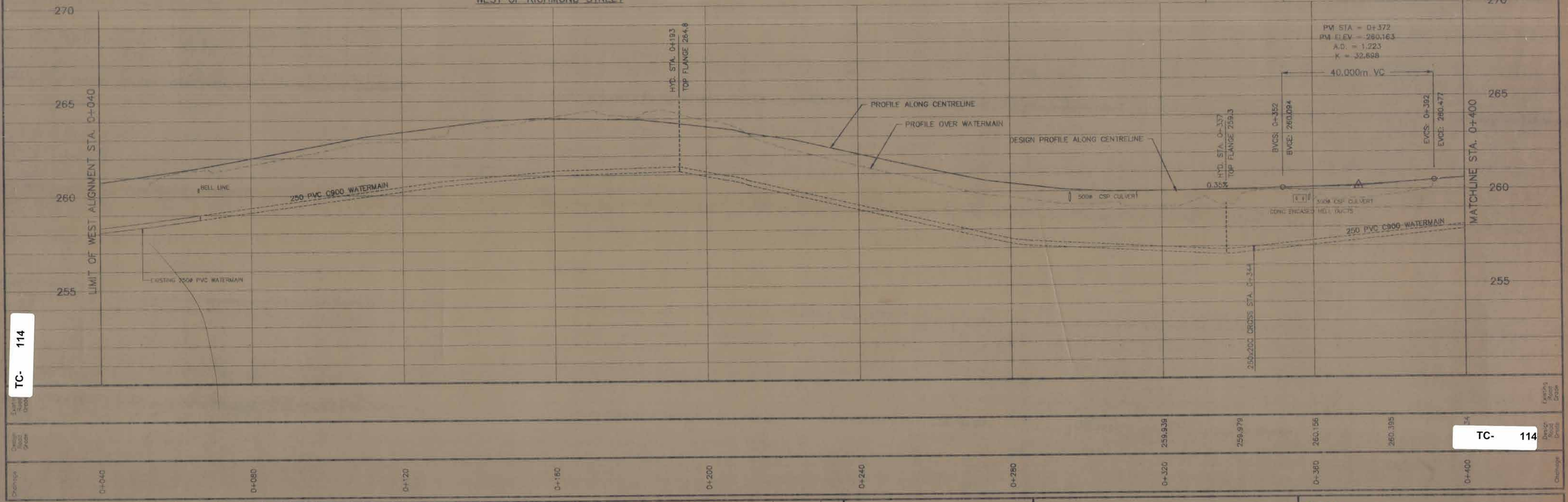
TC- 78

IN THE 1996 CONSTRUCTION SEASON, MARION STREET WAS BUILT TO GRAN 'A' GRADES. TO ACHIEVE THE FINAL GRADES SHOWN 100mm OF RECYCLED ASPHALT AND 20mm OF SURFACE TREATMENT WILL BE PLACED IN 1997.



TYPICAL TRENCH DETAIL

TYPICAL ROADWAY GRADING SECTION
WEST OF RICHMOND STREET



TC- 114

TC- 114

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES.

TBM:
TOP OF SID 2.5m EAST OF STATION 0+00,
6.5m SOUTH OF EDGE OF ASPHALT.
ELEV. = 258.52

VALVE OPERATOR DETAIL AS PER OPSD 1101.02
WATERMAIN CLASS 'B' BEDDING DETAIL AS PER OPSD 1102.01
CONCRETE THRUST BLOCKS FOR TEES, AND HORIZONTAL BENDS AS PER OPSD 1103.01
CONCRETE THRUST BLOCKS FOR VERTICAL BENDS AS PER OPSD 1103.02
WATER SERVICE CONNECTION DETAIL AS PER OPSD 1104.01
HYDRANT INSTALLATION DETAIL AS PER OPSD 1105.01
WATER SERVICES ARE 20mm DIAMETER
HYDRANT LEADS ARE 150mm DIAMETER

No	Revision	Date	Initial
2	AS-CONSTRUCTED	MARCH 1997	MCC
1	ADDENDUM No. 1	AUGUST 18/96	MCC

NORTH DORCHESTER
PUBLIC UTILITIES COMMISSION

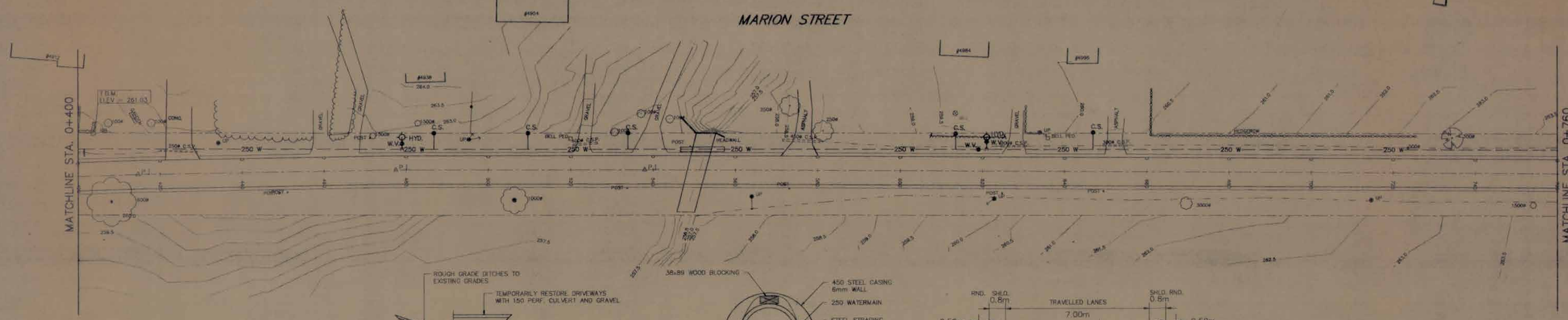
MARION STREET WATERMAIN EXTENSION

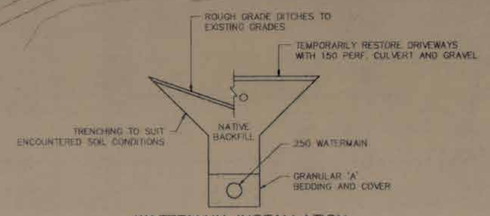
MARION STREET
STA. 0+040 TO STA 0+400

CRA Consulting Engineers
CONESTOGA-ROVERS & ASSOCIATES
651 Colby Drive, Waterloo, Ontario Canada N2V 1C2

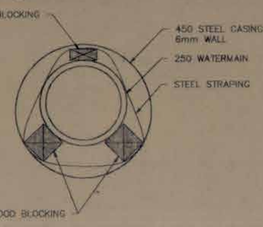
Drawn by:	RMM	Scale: HORZ 1:500 VERT 1:100	Date: JUNE 1996	File No: PP01	Rev. No: 2
Designed by:	MCC	Field book:	Project No: 8111	Drawing No: 1-AR	
Checked by:	RCH				

IN THE 1996 CONSTRUCTION SEASON, MARION STREET WAS BUILT TO GRAN 'A' GRADES. TO ACHIEVE THE FINAL GRADES SHOWN 100mm OF RECYCLED ASPHALT AND 19mm OF SURFACE TREATMENT WILL BE PLACED IN 1997.

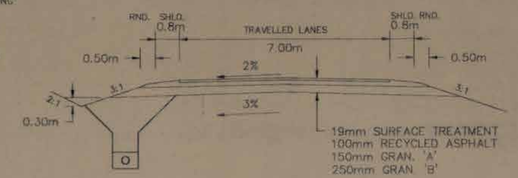




WATERMAIN INSTALLATION
EAST OF RICHMOND STREET



WATERMAIN IN CASING

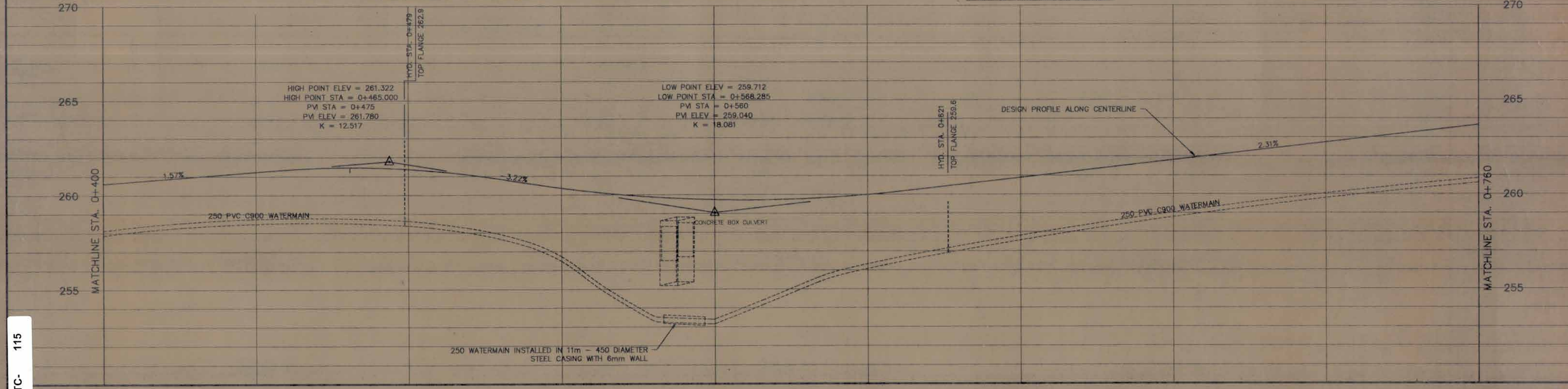


COMPLETED ROADWAY GRADING SECTION
EAST OF RICHMOND STREET

LEGEND

R.S.	ROAD SIGN	W.V.	WATER VALVE
U.P.	UTILITY POLE	D.I.	DITCH INLET
C.B.	CATCH BASIN	HYD.	FIRE HYDRANT
BELL PED.	BELL PEDESTAL	G.V.	GAS VALVE
S.I.B.	STANDARD IRON BAR	M.H.	MANHOLE
UTILITY MARKER	UTILITY MARKER		
	PROPERTY LINE		ROAD CENTRELINE PROFILE

270



TC- 115

TC- 115

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES.

TBM
TOP OF SIB 4.0m EAST OF HOUSE # 4912
DWY. CURB, 7.2m NORTH OF EDGE OF GRAVEL ROAD.
ELEV = 261.03

VALVE OPERATOR DETAIL AS PER OPSD 1101.02
WATERMAIN CLASS 'B' BEDDING DETAIL AS PER OPSD 1102.01
CONCRETE THRUST BLOCKS FOR TEES, AND HORIZONTAL BENDS AS PER OPSD 1103.01
CONCRETE THRUST BLOCKS FOR VERTICAL BENDS AS PER OPSD 1103.02
WATER SERVICE CONNECTION DETAIL AS PER OPSD 1104.01
HYDRANT INSTALLATION DETAIL AS PER OPSD 1105.01
WATER SERVICES ARE 20mm DIAMETER
HYDRANT LEADS ARE 150mm DIAMETER

No	Revision	Date	Initials
1	AS-CONSTRUCTED	MARCH 1997	MCG

NORTH DORCHESTER PUBLIC UTILITIES COMMISSION

MARION STREET WATERMAIN EXTENSION

MARION STREET-AS CONSTRUCTED
STA. 0+400 TO STA 0+760

CRA Consulting Engineers
CONESTOGA-ROVERS & ASSOCIATES
651 Colby Drive, Waterloo, Ontario Canada N2V 1C2

Drawn by: BMM	Scale: HORZ 1:500 VERT 1:100	Date: JUNE 1996	File No: PP02	Rev. No: 1
Designed by: MCG				
Checked by: ROH	Field book:	Project No: 8111	Drawing No: 2--AR	

APRIL 1/97(W)

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES.

TBM:
TOP OF SIB 112.5m EAST OF HOUSE # 5080, 8.7m NORTH OF EDGE OF GRAVEL ROAD
ELEV = 264.387

VALVE OPERATOR DETAIL AS PER OPSD 1101.02
WATERMAIN CLASS 'B' BEDDING DETAIL AS PER OPSD 1102.01
CONCRETE THRUST BLOCKS FOR TEES, AND HORIZONTAL BENDS AS PER OPSD 1103.01
CONCRETE THRUST BLOCKS FOR VERTICAL BENDS AS PER OPSD 1103.02
WATER SERVICE CONNECTION DETAIL AS PER OPSD 1104.01
HYDRANT INSTALLATION DETAIL AS PER OPSD 1105.01

WATER SERVICES ARE 20mm DIAMETER
HYDRANT LEADS ARE 150mm DIAMETER

No	Revision	Date	Initial
2	AS-CONSTRUCTED	MARCH 1997	MCO
1	ADDENDUM No. 1	AUG 16/96	MCO

NORTH DORCHESTER
PUBLIC UTILITIES COMMISSION

MARION STREET WATERMAIN EXTENSION

MARION STREET—AS CONSTRUCTED STA. 0+760 TO STA 1+120

CRA Consulting Engineers
CONESTOGA-ROVERS & ASSOCIATES
651 Colby Drive, Waterloo, Ontario Canada N2V 1C2

Drawn by:	Scale:	Date:	File No:	Rev. No:
SSM	HORZ 1:500 VERT 1:100	JUNE 1996	PP03	2

Designed by:	Checked by:	Field Book:	Project No:	Drawing No:
MCO	RCH		8111	3-AR

TC- 116

IN THE 1996 CONSTRUCTION SEASON, MARION STREET WAS BUILT TO GRAN 'A' GRADES. TO ACHIEVE THE FINAL GRADES SHOWN 100mm OF RECYCLED ASPHALT AND 19mm OF SURFACE TREATMENT WILL BE PLACED IN 1997.

Existing Road Grade																	
Design Road Grade	269.486	270.709	272.131	273.667	275.028	276.143	277.013	277.637	278.015	278.147	278.034	277.682	277.302	277.062	276.967	277.017	277.212	277.546
Chainage	1+120		1+160		1+200		1+240		1+280		1+320		1+360		1+400		1+440	

TC- 117

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES.

TBM:
TOP OF SIB MID SPAN BETWEEN BELL PED., 5.7m NORTH OF EDGE GRAVEL ROAD.
ELEV = 278.347

VALVE OPERATOR DETAIL AS PER OPSD 1101.02
WATERMAIN CLASS 'B' BEDDING DETAIL AS PER OPSD 1102.01
CONCRETE THRUST BLOCKS FOR TEES, AND HORIZONTAL BENDS AS PER OPSD 1103.01
CONCRETE THRUST BLOCKS FOR VERTICAL BENDS AS PER OPSD 1103.02
WATER SERVICE CONNECTION DETAIL AS PER OPSD 1104.01
HYDRANT INSTALLATION DETAIL AS PER OPSD 1105.01
WATER SERVICES ARE 20mm DIAMETER
HYDRANT LEADS ARE 150mm DIAMETER

No	Revision	Date	Initial
1	AS-CONSTRUCTED	MARCH 1997	MCG

NORTH DORCHESTER
PUBLIC UTILITIES COMMISSION

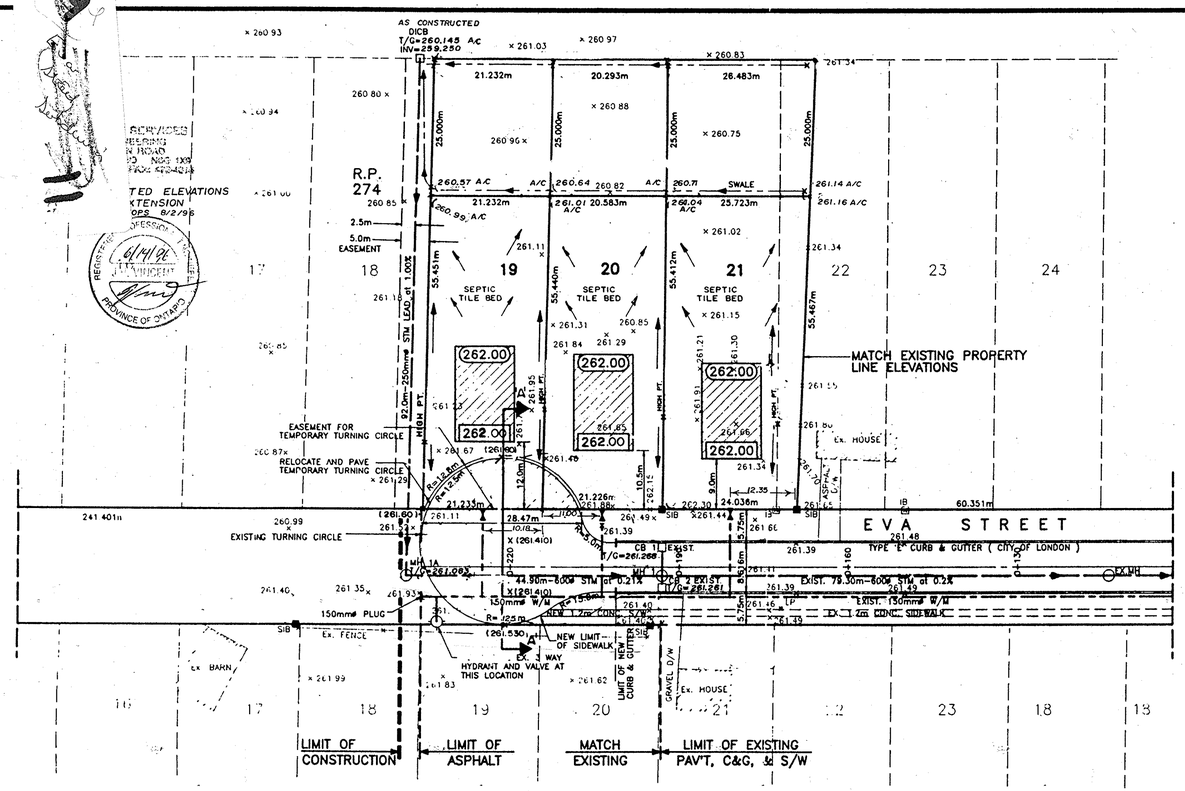
MARION STREET WATERMAIN EXTENSION

MARION STREET–AS CONSTRUCTED
STA. 1+120 TO STA 1+462

CRA Consulting Engineers
CONESTOGA-ROVERS & ASSOCIATES
651 Colby Drive, Waterloo, Ontario Canada N2V 1C2

Drawn by: BMM	Scale: HORZ 1:500 VERT 1:100	Date: JUNE 1996	File No: PP04	Rev. No: 1
Designed by: MCG	Field book:	Project No: 8111	Drawing No: 4–AR	
Checked by: RCH				

APRIL 1/97(M)



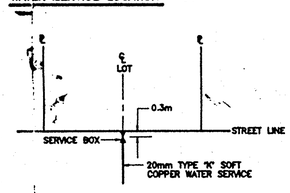
GENERAL NOTES:

1. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY MEASURES TO CONTROL SILT ENTERING THE STORM DRAINAGE SYSTEM TO THE SPECIFICATIONS OUTLINED IN THE GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES PREPARED BY THE MINISTRY OF NATURAL RESOURCES. THESE MEASURES ARE TO BE INSTALLED PRIOR TO COMMENCING ANY CONSTRUCTION FOR THIS SUBDIVISION PROJECT, AND ARE TO REMAIN IN PLACE UNTIL CONSTRUCTION HAS BEEN COMPLETED TO THE SPECIFICATIONS OF THE TOWNSHIP ENGINEER.
2. NO WEEPING TILE CONNECTIONS WILL BE PERMITTED INTO THE FUTURE SANITARY SEWERS AND NO DIRECT GRAVITY CONNECTIONS FROM THE WEEPING TILES WILL BE PERMITTED TO THE STORM SEWER SYSTEM UNLESS THE STORM SYSTEM HAS THE CAPACITY TO PROVIDE FOR SUCH CONNECTIONS TO THE SATISFACTION OF THE TOWNSHIP ENGINEER. HOWEVER, PUMPED CONNECTIONS FROM THE WEEPING TILES TO THE STORM SEWER WILL BE PERMITTED.
3. ALL WORK SHALL MEET MINIMUM STANDARDS AND SPECIFICATIONS OF THE TOWNSHIP OF NORTH DORCHESTER, DORCHESTER P.U.C. & THE ONTARIO PROVINCIAL STD. DWGS & SPECS.
4. THE CONTRACTOR IS TO MEET ALL THE REQUIREMENTS OF THE OWNERS OF THE UTILITIES ON THIS PLAN, AND MUST MAKE SATISFACTORY ARRANGEMENTS WITH THE UTILITY COMPANIES FOR CROSSING THEIR INSTALLATIONS AND FOR PROVIDING ADEQUATE PROTECTION DURING CONSTRUCTION.
5. ALL ORGANIC UNSTABLE MATERIALS BENEATH THE ROAD ALLOWANCES OR HOUSE FOUNDATIONS MUST BE REMOVED AND THESE AREAS BACKFILLED WITH AN APPROVED GRANULAR MATERIAL, ALL TO THE SATISFACTION OF A GEOTECHNICAL ENGINEER.
6. EXISTING DRAINAGE OF ABUTTING LANDS IS NOT TO BE DISTURBED.
7. BASEMENT OPENINGS TO BE MINIMUM 300mm ABOVE CENTRELINE OF ROAD UNLESS OTHERWISE APPROVED BY THE TOWNSHIP ENGINEER.
8. ALL ROOF WATER OUTLETS FROM THE PROPOSED BUILDINGS AND DRAINAGE FROM IMPERVIOUS AREAS ON THESE LOTS ARE TO BE DIRECTED TOWARDS THE FRONTING STREET UNLESS OTHERWISE APPROVED BY THE TOWNSHIP ENGINEER.
9. SUMP PUMP DISCHARGE MUST BE DIRECTED AWAY FROM DRIVEWAYS
10. RETAINING WALLS, ETC. ARE TO BE DESIGNED BY AND CONSTRUCTED TO THE SPECIFICATIONS OF A REGISTERED PROFESSIONAL ENGINEER.
11. ALL CLASS 4 SEWAGE DISPOSAL SYSTEMS (SEPTIC TANK SYSTEMS) ARE TO BE LOCATED IN THE REAR PORTION OF LOTS & MUST BE REVIEWED & APPROVED BY THE APPROPRIATE AUTHORITY.
12. ALL EXISTING SOD, SIDEWALK, CURB & GUTTER, ETC. DISTURBED BY CONSTRUCTION MUST BE RESTORED.

CONSTRUCTION NOTES:

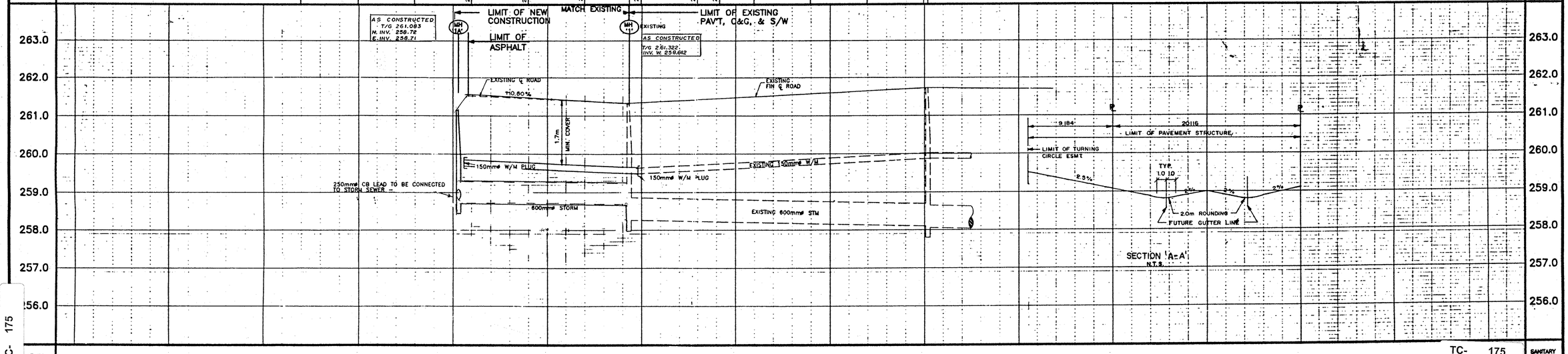
1. DITCH INLET CATCHBASINS AS PER O.P.S.D. 705.04 WITH 3:1 GRATE SLOPE
2. ALL WATER SERVICES TO BE 20mm TYPE 'K' SOFT COPPER.
3. ALL WATERMAINS SHALL BE C900 CL. 150 P.V.C. WITH BEDDING AS PER O.P.S.D. .1102.02 FOR FLEXIBLE PIPE
4. ALL STORM SEWER & CB CONNECTIONS TO HAVE APPROVED RUBBER GASKET JOINTS
5. CB LEADS SHALL BE 250mmø P.V.C. S.D.R. 35 BEDDING AS PER O.P.S.D. 802.04 TYPE I
6. PAVEMENT STRUCTURE : 200mm GRAN. 'B'
   150mm GRAN. 'A'
   50mm HL8
   25mm HL3

WATER SERVICE LOCATION



LEGEND

- 0+205.827 ℄ ROAD STATION
- 142.00 PROP. FRONT APRON ELEV.
- 139.00 PROP. BACK APRON ELEV.
- (261.50) PROPOSED ELEVATION
- × 260.75 EXISTING ELEVATION
- DIRECTION ON DRAINAGE FLOW
- SWALE
- STRAW BALE CHECK DAM
- 20mm WATER SERVICE



TC- 175

TC- 175

No	REVISIONS	DATE	BY
3	REVISED ROAD, TURNING CIR & LOT EL., SECT 'A-A'	NOV. 3/92	K.B.
2	REVISIONS TO NOTES & LOT GRADING	OCT. 23/92	K.B.
1	RELOCATE RLCB AND REVISED SWALE GRADES	OCT. 9, 1992	K.B.

NOTES:

BENCHMARK

1.) TOP SPINDLE OF HYDRANT AT SOUTHWEST CORNER OF CLARA AND EVA STREETS
Elevation = 261.112m

2.) TOP SPINDLE OF HYDRANT AT WEST END OF ORIGINAL EVA STREET JUST EAST OF NEW HOUSES BUILT ON EVA STREET
Elevation = 262.536m

STAMP: REGISTERED PROFESSIONAL ENGINEER W. A. WILSON Oct 13/92 PROVINCE OF ONTARIO

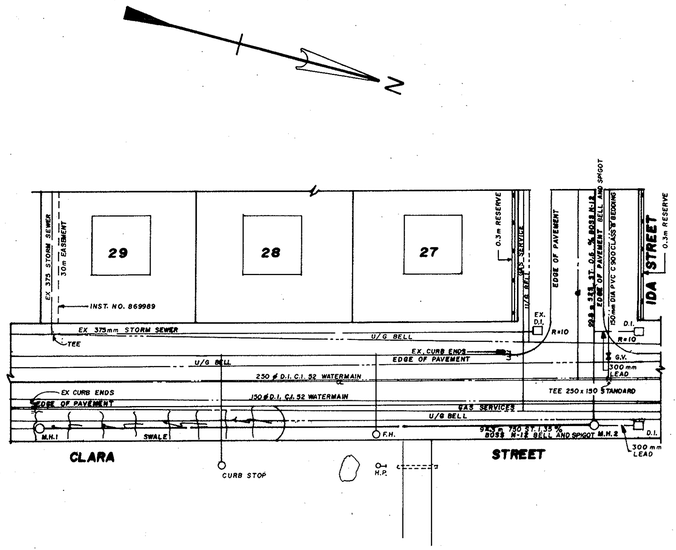
MUNICIPALITY: TOWNSHIP OF NORTH DORCHESTER

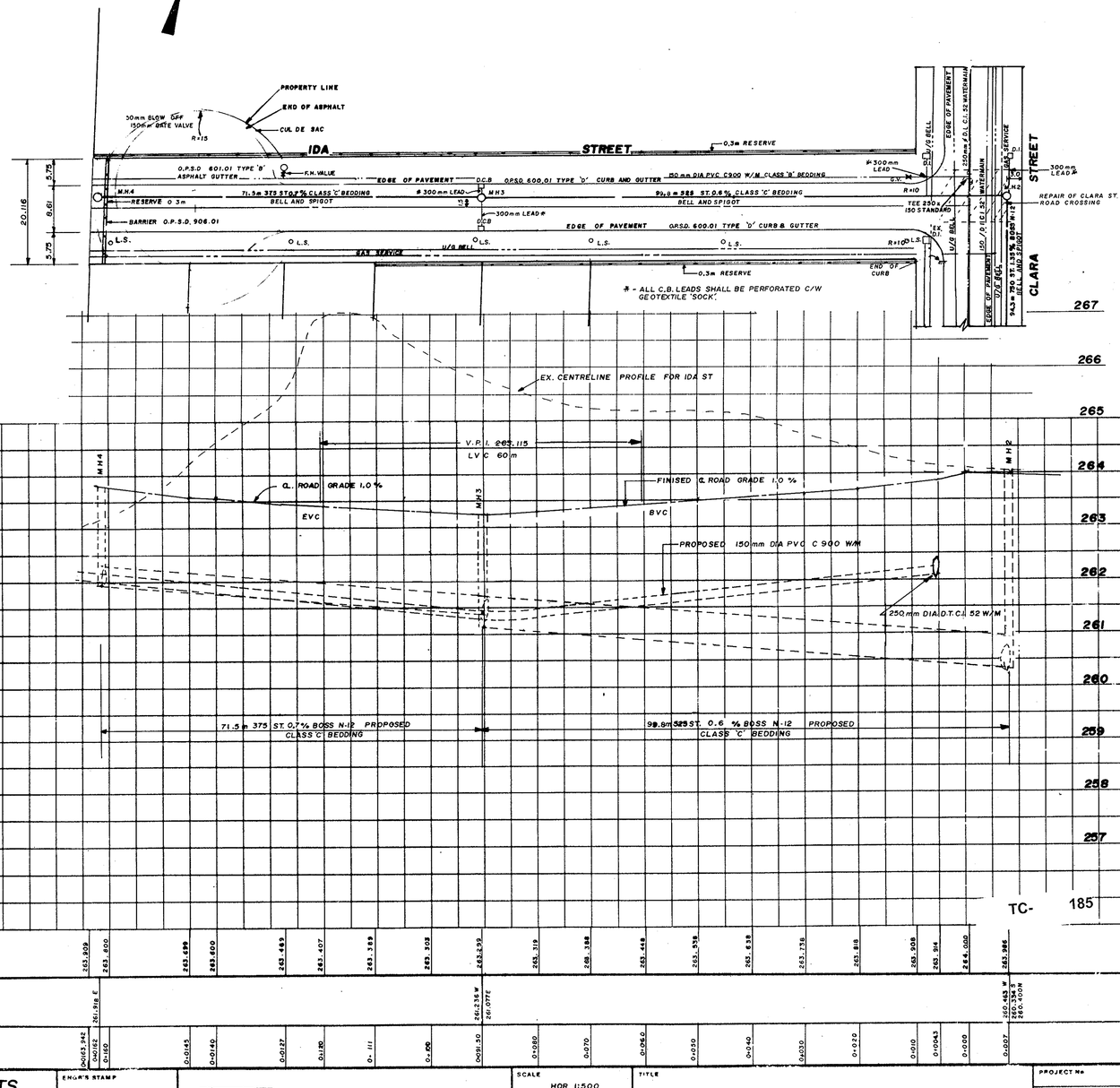
CONSULTANT: UPPER CANADA CONSULTANTS
CONSULTING ENGINEERS/PLANNERS
708 Richmond Street, Valley Building Suite 222, London, Ontario, N6A 5C7

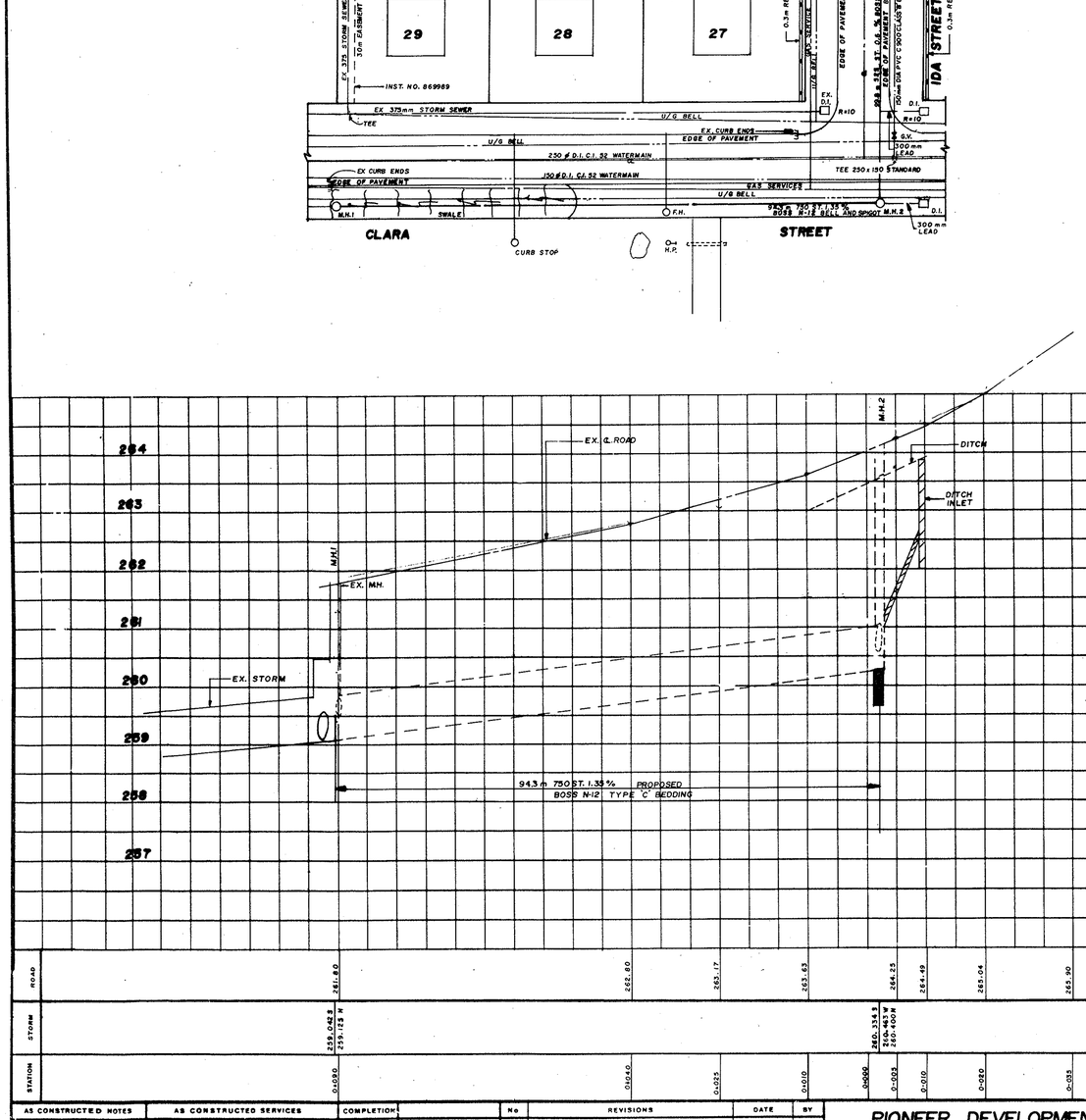
TITLE: EVA STREET, DORCHESTER
LOTS 19, 20, & 21 RP 274
SITE SERVICING & LOT GRADING PLAN

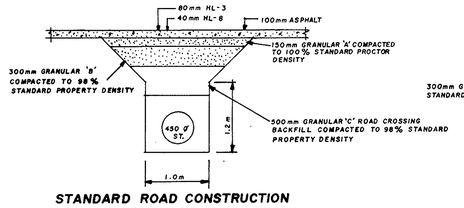
DESIGN: K.B.	DRAWING: M.D./R.E.M.
DATE: AUGUST 1992	
SCALE: HOR. 1:500, VERT. 1:50	
PROJECT No: 2189	DWG No: PP-1
REV.	

JAN 19 1993

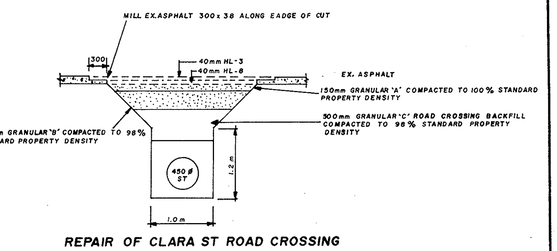








STANDARD ROAD CONSTRUCTION



REPAIR OF CLARA ST ROAD CROSSING

ROAD	261.80	262.60	263.17	263.63	264.25	264.49	264.04	263.90	263.209	263.400	263.499	263.600	263.483	263.407	263.389	263.308	263.593	263.319	263.388	263.448	263.578	263.638	263.736	263.818	263.908	263.914	264.000	263.986
STORM	259.042 E 259.193 W				260.334 E 260.443 W 260.400M				261.318 E								260.258 W 260.077 E										260.443 W 260.334 E 260.400M	
STATION	0+080	0+040	0+023	0+010	0+000	0+002	0+010	0+020	0+035	0+042	0+060	0+150	0+145	0+140	0+127	0+120	0+111	0+100	0+081.50	0+080	0+070	0+060	0+050	0+040	0+030	0+020	0+010	0+004.3	0+000	0+007

AS CONSTRUCTED NOTES	AS CONSTRUCTED SERVICES	COMPLETION		No	REVISIONS	DATE	BY
1 SEE DRAWING No FOR FURTHER DETAIL	STORM SEWER	DEC/93	DESIGN	J.H.V.	AS PER SUBMISSION I	07-29-92	F.M.
2 SEWER DESIGN: TRANSITION WIDTH OR AS NOTED	WATERMAIN	JAN/93	DRAWN	F.M.	AS PER SUBMISSION II	10-26-92	F.M.
3 REFERENCE R. M. No ELEVATION m	CURB & GUTTER	APRIL/93	CHECKED	J.H.V.	AS CONSTRUCTION	07-19-93	F.M.
4	RESTORATION	APRIL/93	APPROVED		AS PER SUBMISSION III	08-12-93	F.M.
5	GRANULAR A	MAR/93	DATE				
	GRANULAR B	MAR/93					
	ASPHALT BASE	MAY/93					
	FINISH	MAY/93					

PIONEER DEVELOPMENTS
A DIVISION OF 344602 ONT. LTD.

ENGR'S STAMP

J.H. Vincent Services
A Division of 509228 Ontario Limited
449 Lawson Rd.
London, Ontario N6G 1X9
(519) 472-9068

SCALE
HOR 1:500
VERT 1:50
Horizontal
Vertical

TITLE
IDA, CLARA STREET
PLAN PROFILE

PROJECT No

SHEET No 5

PLAN FILE No

TC- 185

TC- 185

Appendix B